LEVEL II

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ARMY AVIATION MAINTENANCE CAREER MANAGEMENT FIELD 67 STUDY

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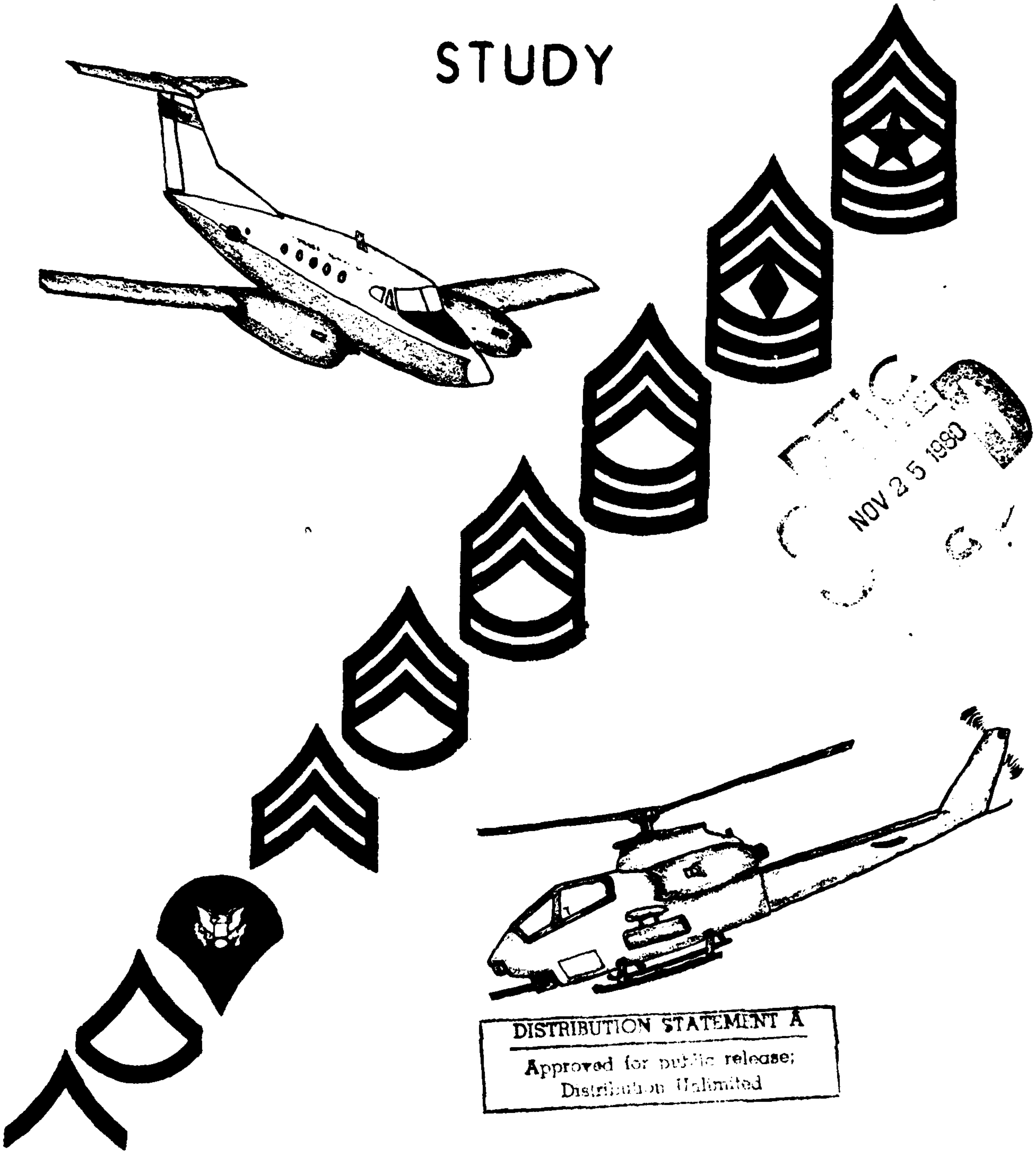

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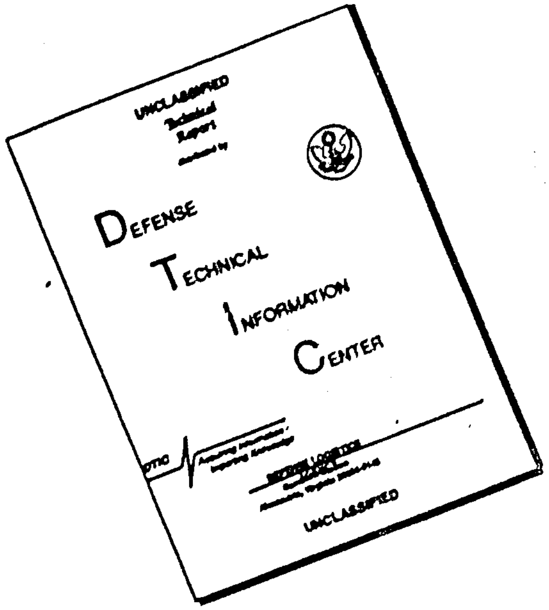

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
The Army Aviation Maintenance Career Management Field 67 Study was directed by Department of the Army and was conducted under the sponsorship of the Deputy Chief of Staff for Logistics. The Study was charged with conducting an in-depth evaluation of the 17 aircraft repair and aircraft component repair MOS (Military Occupational Specialties) which constitute the enlisted aviation maintenance career management field (CMF 67) and with providing appropriate recommend-

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Block 20: ations regarding problem resolution. Chapter areas of interest include: Aviation Force Structure, Personnel Management, Enlisted Aviation Maintenance Training, Army Aviation Maintenance, Nonaviator Flying Status for Enlisted Personnel, and Reserve Component Implications. The Study concludes that there has been a decline in Army aviation maintenance effectiveness. The reasons for this decline include: an inadequate organizational structure, an ineffective MOS structure, inappropriate grade authorizations, an unsatisfactory first term reenlistment rate for aviation maintenance personnel, a less than effective aviation maintenance training program, and increased equipment complexity.

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DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS
WASHINGTON, D.C. 20310

DALO-AV-A

8 October 1980

SUBJECT: Army Aviation Maintenance Career Management Field 67 Study

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1. The Career Management Field 67 Study has been completed. The Steering Committee is composed of members from DA ODCSOPS, DA ODCSPER, USAMILPERCEN, USAFORSCOM, USATRADOC, USAREUR, USARCPAC and chaired by Mr. Joseph P. Cribbins, Special Assistant to the Deputy Chief of Staff for Logistics. Colonel Ronald C. Vines was Chairman of the Study Group. Other members of the study group are listed on page 51 of the study report.

2. On 29 September 1980, study group findings were briefed to the Vice Chief of Staff, Army. Study findings are now being evaluated by USATRADOC with the following recommendations to be considered:

a. Revise CMF/MOS structure.

b. Revise Standards of Grade Authorization (SGA).

c. Revise grade/skill level authorization.

d. Develop comprehensive aviation maintenance training program.

e. Identify appropriate incentives to retain experienced aviation maintenance personnel.

3. USATRADOC has also been tasked to identify actions and resources required for implementation and to develop an implementation plan with appropriate milestone schedule.

4. A decision briefing will be given to the VCSA NLT 31 December 1980. The Steering Committee will remain ad hoc until implementation decisions have been finalized.

Joseph P. Cribbins

JOSEPH P. CRIBBINS
Chairman, CMF 67 Steering Committee

DALO-AV-A 8 October 1980

SUBJECT: Army Aviation Maintenance Career Management Field 67 Study

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ABSTRACT TO EXECUTIVE SUMMARY

1. There is increasing evidence of a significant decline in Army aviation maintenance effectiveness and technical competence. Many reasons exist for this decline; however, a common donominator to all problems is the failure of planners to fully recognize the interrelationships and interdependence between the training, personnel management, and force structure systems and unit mission. This has resulted in force structure grade and skill requirements which cannot be met; an initial training program which fails to provide graduates with the skills required of the duty positions they must fill; a CMF/MOS structure which does not provide an effective means of training, managing, and utilizing personnel; and organizational structures which further impede effective personnel utilization.

These and other issues are explored in the "Army Aviation Maintenance Career Management Field 67 Study." This study was conducted under the authority of HQDA Letter 600-78-7 and was sponsored by ODCSLOG. The Study was charged with conducting an in-depth evaluation of the 17 aircraft repair and aircraft component repair MOS which constitute CMF 67 and with providing appropriate recommendations regarding problem resolution.

2. The Study Report is organized along functional lines with Chapters devoted to Force Structure, Personnel, Training, Aviation Maintenance, Nonaviator Flying Status, and Reserve Component. Principal findings include:

a. FORCE STRUCTURE. The MOS which constitute CMF 67 lack grade sustainability or feasibility. Consequently current enlisted aviation maintenance grade and skill requirements cannot be sustained. Futhermore, career development opportunity is poor in many occupational specialties due to a lack of adequate promotion opportunity. Many of these same characteristics are apparent in the overall Army MOS structure. Aviation maintenance authorization documents (TOE/MTOE/TDA) contain significant inconsistencies and inefficiencies, reflect a wide disparity in the application of ASI and SQI, and contain significant errors in MOS and duty title. The aviation force structure fails to adequately consider training and personnel management considerations and as a consequence provides insufficient resources to adequately accomplish the operational mission, perform appropriate maintenance, and concurrently execute an effective unit SOJT (supervised on-the-job training) program. Structured supervisory positions are inadequate in terms of MOS and unit requirements. However, aggregate authorizations in CMF 67 are excessive at grades E5, E6, and E7. Furthermore, TDA organizations contain a significantly excessive share of CMF 67 supervisory (E6-E9) authorizations. The current Technical Inspector/Quality Control Program is totally unsatisfactory in terms of effective maintenance or effective personnel management. The Study notes that the introduction of new weapons systems generally tends to exacerbate

existing force structuring problems. As an example, the proposed authorization and organizational structure for the Air Cavalry Attack Brigade contain the same general deficiencies of the current enlisted aviation maintenance force; however, many problems are exacerbated. It is considered essential that any attempt to improve aviation combat effectiveness, concurrently recognize current CMF 67 grade structure deficiencies, career progression problems, and training implications. The Study also identifies problems relating to aerial scout observers and helicopter door gunners.

b. PERSONNEL. The current subfield and MOS structure for CMF 67 is unsatisfactory in terms of the ability to effectively manage, train, and utilize the enlisted aviation maintenance force. Examples of this include; consolidation of all fixed wing aircraft repair duties under one MOS, consolidation of seven diverse aircraft component repair MOS under one subfield, consolidation of all Skill Level 4 aircraft repair supervisors under one MOS, and an inability to identify requirements or recognize personnel trained as Technical Inspectors. Also, the current SGA (Standards of Grade Authorization) will not produce a sustainable or feasible grade structure. Consequently current authorizations in CMF 67 are significantly greater at grades E5, E6, and E7 than can be sustained. In the aircraft repair subfield, this has resulted in rapid promotion to E5, generally without regard to skill level attainment, and with stagnation at grade E5. There is generally very limited promotion opportunity to grade E5, E6, and E7 in the component repair subfield. Consequently, aviation maintenance personnel have a greater amount of TIG as an E5 and more TIS upon promotion to E6 than the Army wide average. This has contributed to the inadequate retention of aviation maintenance personnel beyond their first term of service. First term retention requirements are being sustained by the reenlistmenet of personnel into CMF 67 from other occupational specialties. During FY 79, 54 percent of all first term aviation maintenance reenlistees were migrations from other occupational specialties. This represents a significant retraining expense for these personnel as well as a significant disparity between their actual aviation maintenance skill level and that denoted by their TIS and grade. These factors and the method to assess SRB need, tends to obscure the requirement for additional monetary incentives to first term retention of CMF 67 personnel. The Study further notes deficiencies in the enlisted Semi-Centralized Promotion System and in utlization of women in aviation organizations.

c. TRAINING. Aviation maintenance training development plans do not effectively recognize the aggregate interrelationships between training, personnel management, and force structure implications; unit mission requirements and capabilities; and total training implications (Institutional and Unit SOJT). Furthermore, the MOS critical task lists, which are contained in Commander's Manuals (CM) and Soldier's Manuals (SM) and which reflect current training development, are not based upon a thorough job and task analysis, have not been properly validated, reflect a

significant degree of inconsistency, and are inadequate to meet wartime requirements. Current aviation maintenance Advanced Individual Training (AIT), which generally reflects a greater amount of institutional training than projected by Commander's Manuals for future training, does not provide sufficient training to enable the graduate to perform the tasks required on the battlefield. Current AIT courses have not been properly developed, are not based upon an ISD process, have not been properly validated, generally include no comprehensive end-of-course testing, and are not compatible with Commander's and Solder's Manuals. This results in an ineffective use of training resources. Consequently, the training program is not providing the skills required of force structure nor sufficient, technically qualified first-line supervisors. The Study also notes that enlisted aviation maintenance training lacks effective management and that disparities between force structure requirements, MOS structure, and training methodology; contribute significantly to current training ineffectiveness. The field's ability to conduct an effective unit SOJT program is limited by an unawareness of current institutional training curriculum, inappropriate MOS critical task lists, the magnitude of unit SOJT requirements and other missions, inadequate resources, rapid personnel turnover, a shortage of technically qualified maintenance personnel and supervisors, and the fragmented nature of aviation organizational structures. The Study also notes that the overall state of aviation maintenance training is not being effectively evaluated.

d. AVIATION MAINTENANCE. The effectiveness of Army aviation maintenance is dependent upon the effectiveness of the aviation maintenance training program, the personnel management system, and the force structure; and the relative degree to which the aggregate interrelationships between these areas and unit mission are recognized. Consequently, aviation maintenance tends to reflect the resultant product of previously noted deficiencies as well as a lack of effective management of the overall aviation maintenance program. From an overall aviation maintenance perspective, the tasks required of aviation maintenance personnel exceed the capabilities provided by the current training program, the skill development of enlisted aviation maintenance personnel is hindered by requirements to perform non-maintenance duties, and the unit organizational structure does not contribute to an effective maintenance program. The Study reflects a belief that current manpower authorization criteria (MACRIT) for aviation maintenance personnel do not adequately recognize field conditions and that the current high state of unit readiness and equipment availability are inconsistent with other Study findings. It is further felt that aircraft readiness, especially sustained readiness, is significantly less than reported. The Study notes that over a five year period (CY 74-1st Qtr FY 79) Army aircraft mishaps caused by maintenance error increased in an alarming manner. For example, of 14,732 mishaps during the five year period, maintenance cause factors were present in 11.3% (1663). Of greater significance is the fact that maintenance error was present in 21.6% (92) of all accidents; in 31.9% ($35,281,004) of all costs; in 22.7% (39) of all

fatalities, and 27.5% (130) of all injuries. Furthermore, the rotary wing maintenance error mishap rate increased by 146% and 24% of all maintenance errors were committed by technical inspectors and supervisors.

e. NONAVIATOR FLYING STATUS. The enlisted nonaviator flight status program was found to be uncoordinated, fragmented, and to lack centralized management. Regulatory guidance was found to be confusing, contracdictory, and inequitable; requirements and authorizations are not properly documented in authorization documents; and manpower authorization criteria (MACRIT) contradicts flight status authorization criteria. Furthermore, the lack of an aggregate audit capability precludes effective management in terms of programing for personnel and budgetary requirements.

f. RESERVE COMPONENTS. Study recommendations will result in significant CMF 67 increases at grades E3 and E4 and reductions in E5, E6, and E7 authorizations. In that US Army Reserve Component units are organized under the same authorization documents as the Active Army (AA), imposition of widespread grade reductions in CMF 67 will significantly exacerbate Reserve Component (RC) recruiting and retention of aviation maintenance personnel. The Study finds that the use of similar organization structures by the AA and RC is appropriate. However, due to differences between accession sources, there is a need for increased grade authorzations in RC organizations.

3. Principal Study recommendations include:

- A revised enlisted aviation maintenance CMF and MOS structure.

- A revised SGA for all enlisted aviation maintenance MOS.

- A revised grade authorization structure for CMF 67 which results in the following changes:

E3	E4	E5	E6	E7	E8	E9	TOTAL
+1417	+913	-1599	-318	-294	+10	+16	+145

- Revised MOS specifications for CMF 67.

- Imposition of increased discipline on the document development process.

- Validation of aviation maintenance MACRIT.

- Elimination of substitutability criteria for aviation maintenance MOS.

- Modification of the Semi-Centralized Promotion System.

- Utilization of increased monetary incentives to reenlistment for first term aviation maintenance personnel.

- Validation of current policies regarding aerial scout observes, helicopter door gunners, and utilization of women in aviation organizations.

- Development of a comprehensive aviation maintenance training program which includes:

  o Priorities and milestones by MOS.

  o Properly developed and validated MOS critical tasks lists.

  o Effective distribution of training responsibility.

  o Provisions for providing the required technical and supervisory skills at each grade level.

  o Provisions for a comprehensive Army-wide SOJT program.

  o Adequate resource allocation to support each mode of training.

  o Provisions for assessing aviation maintenance training effectiveness at each level of training responsibility.

- Development of training plans and courses of instruction to support the revised CMF and MOS structure.

- Greater use of aviation maintenance error mishap rates in evaluating aviation maintenance training and maintenance effectiveness.

- Establishment of responsbility for developing and implementing a program to improve Army aviation maintenance.

- Establishment of a viable enlisted nonaviator flying status program to include development of appropriate regulatory guidance.

- Higher authorized grade structure in CMF 67 to Reserve Component organizations.

4. The findings and recommendations of this Study are based on the premise that accurate problem definition and proper resolution can only be attained through recognition of the interdependence and interaction between training, personnel management, force structure, and unit mission. It is believed that implementation of the recommendations will significantly enhance attainment of a more effective fighting force.

It should be noted that the Study Recommendations represent the Study Group's assessment of how best to resolve problems in the Enlisted Aviation Maintenance Career Management Field within Study contraints. They do not represent the only methods of resolution and may not represent the most effective means once all assessments are completed. The Study Group has not conducted all of the in-depth assessments required for implementation and certain recommendations are noted as being conditional based upon the results of further essential analysis. Therefore the Study is not an Implementation Plan. This is a proponent responsbility and the Study Group has neither the expertise nor resources for accomplishment. While conducting the assessments required of a comprehensive, time phased plan, proponents may identify within resource constraints and overall Army priorities, improved means of addressing CMF 67 problems. Consequently, the recommendations are not sacrosanct. What is important is recognition of the significant problems which exist in CMF 67 and realization that an accurate understanding of their interaction and interdependence is essential to problem resolution.

ARMY AVIATION MAINTENANCE

CAREER MANAGEMENT FIELD 67 STUDY

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ARMY AVIATION MAINTENANCE CAREER MANAGEMENT FIELD 67 STUDY

EXECUTIVE SUMMARY

CHAPTER 1

ARMY AVIATION MAINTENANCE CAREER MANAGEMENT FIELD 67 STUDY

EXECUTIVE SUMMARY

1. INTRODUCTION. The year 1980, marks the eighth year since the end of the Vietnam era, a period during which Army aviation technical competence was at its zenith. There is growing evidence of a significant decline in aviation maintenance effectiveness and technical competence during the ensuing period. Reasons for this decline are many and varied. They include an inadequate organizational structure, an ineffective MOS (Military Occupational Specialty) structure, inappropriate grade authorizations, unsatisfactory retention of aviation maintenance personnel beyond their first enlistment, a training program which does not provide the required skills, increased equipment complexity, and other less obvious factors. The expression: "If you don't know where you are going, you don't know if you got there" characterizes many aspects of Army aviation maintenance today. The Army has failed to adequately recognize evolutionary changes in, and interrelationships beween personnel, equipment, training, organizational structure, and unit mission. Consequently we have assumed an adequate state of readiness rather than establishing specific training, personnel management, force structure goals, and regularly evaluating the aviation maintenance program in terms of these goals.

The Army Aviation Maintenance Career Management Field (CMF) 67 Study, under the sponsorship of ODCSLOG, convened on 15 March 1979 under the authority of HQDA Letter 600-78-7. Study Group membership consisted of personnel from the HQDA staff and major commands. The study was charged with conducting an in-depth evaluation of the 17 aircraft repair and aircraft component repair MOS which constitute CMF 67 and with providing appropriate recommendations regarding problem resolution. Study objectives were:

A. Develop a grade feasible structure for the Table of Organization and Equipment (TOE)/Modified Table of Organization and Equipment (MTOE)/Table of Distribution and Allowances (TDA) aviation units that considers today's budget and force content constraints.

B. Achieve appropriate MOS promotion opportunity.

C. Provide authorization for necessary first-line supervisors.

D. Develop appropriate Standards of Grade Authorizations (SGA).

E. Provide recommendations relative to CMF 67 training which enhance individual proficiency and unit readiness.

F. Provide recommendations regarding the effect of planned force structure changes upon CMF 67 during the 1981-1985 time frame.

G. Validate enlisted flight pay entitlements.

Findings and recommendations of this study are based on the premise that accurate problem definition and proper resolution can only be attained through recognition of the interdependence and interaction between training, personnel management, force structure, and unit mission. Implementation of these recommendations will improve the state of Army aviation maintenance and provide a means of assuring that soldiers in CMF 67 are properly qualified to perform on the battlefield. As noted by the Army Chief of Staff in his "White Paper 1980: A Framework for Molding the Army of the 1980s Into a Disciplined, Well-trained Fighting Force." "In order to avoid having to go to war with a pick-up team, Army Forces must be structured based on warfighting requirements." He further noted that the US must be prepared to "deter the day before the war, to fight the day of the war, and to terminate the conflict in such a manner that on the day after the war the US and its allies enjoy an acceptable level of security." It is believed that implementation of this study will significantly enhance attainment of these goals.

It should be noted that the Study Recommendations represent the Study Group's assessment of how best to resolve problems in the Enlisted Aviation Maintenance Career Management Field within Study constraints. They do not represent the only methods of resolution and may not represent the most effective means once all assessments are completed. The Study Group has not conducted all of the in-depth assessments required for implementation and certain recommendations are noted as being conditional based upon the results of further essential analysis. Therefore the Study is not an Implementation Plan. This is a proponent responsibility and the Study Group has neither the expertise nor resources for accomplishment. While conducting the assessments required of a comprehensive, time phased plan, proponents may identify within resource constraints and overall Army priorities, improved means of addressing CMF 67 problems. Consequently, the recommendations are not sacrosanct. What is important is recognition of the significant problems which exist in CMF 67 and realization that an accurate understanding of their interaction and interdependence is essential to problem resolution.

2. FORCE STRUCTURE.

A. DISCUSSION.

(1) GRADE SUSTAINABILITY. CMF 67 is comprised of 17 aviation maintenance MOS (7 aircraft repair/67 Series MOS, 7 aircraft component repair/68 Series MOS, and 3 supervisory MOS) and constitutes 17,067 authorizations among 415 TOE and TDA organizations in the TAADS (The Army Authorization Documentation System). These MOS have a significant lack of

grade sustainability or grade feasibility. A sustainable MOS is one which has sufficient lower grade positions to allow for attrition, acquisition of proficiency and experience, provide promotion selectivity to the next higher grade, and produce the quality and quantity required at the next higher grade. A sustainable MOS structure is generally pyramidal in shape with a reduced number of personnel authorized at each successively higher skill level. As a self-renewing structure, the Active Army is almost totally dependent upon E1 accessions as the ultimate source of supervisory personnel. The lack of grade sustainability leads to inventory shortages at unsustainable grades and insufficient skill and experience among incumbents at the unsustainable grades. Failure to recognize this, mandates that the grade and skill requirements of the force structure will not be met.

The sustainability problems which have been identified in CMF 67 are not peculiar to aviation maintenance. A review of 315 other MOS and 29 CMF (CMF 97 - Band excluded) revealed that 69.5 percent (219 MOS) were unsustainable in at least one grade. Of the 219 MOS, 63 (28.8 percent) were unsustainable at two or more grades. An MOS was considered to be unsustainable when authorizations at a higher grade exceeded authorizations at the next lower grade; therefore, demanding a continuation rate in excess of 100 percent to satisfy requirements.

(2) FORCE STRUCTURE DOCUMENTATION. The enlisted aviation maintenance force structure has not been developed in the most effective manner. Each segment reflects proponent expertise and vested interests and frequently ignores associated training and personnel management implications. CMF 67 authorizations are divided among 305 TOE and 110 TDA organizations with authorizations documented under 81 TOE which have been further modified into 134 different structures by MTOE actions. The large number of TOE, MTOE, and TDA in conjunction with the number of proponents responsible for their development, significantly increases the probability of the authorization documents being unsupportable. Authorization documents reflect a wide variance in aviation organizations. The MTOE includes platoons which range from 152 enlisted personnel to five personnel, each with an E7 platoon sergeant. Flight platoon authorizations range from 47 repairer/crew chiefs (no E6 supervisors, and one E7) to those with nine enlisted personnel, all but one of which are grades E6 or E7. Other documentation problems pertain to SGA application, ASI/SQI (Additional Skill and Special Skill Qualification Identifiers) application, MOS classification, and job title designation.

(3) FORCE STRUCTURE ADEQUACY. The Special Study Group (SSG) attempted to validate current aviation maintenance MACRIT (Manpower Authorization Criteria). An objective analysis was unsuccessful; however, it is the SSG opinion that current MACRIT does not adequately recognize the scope of aviation maintenance AIT (Advanced Individual Training), the magnitude of unit SOJT (Supervised On-The-Job Training) responsibility, and unit maintenance requirements. Current MACRIT does not adequately recognize that 35 percent of all Skill Level 1 and 2 positions (E3, E4 and E5) must be

filled by personnel who have been out of AIT less than 1 year and that training for 63 percent of all Skill Level 1 and 2 tasks is a unit SOJT responsibility. This situation is exacerbated by problems relating to supervisory authorizations and TI/QC (Technical Inspector/Quality Control) considerations. Significantly more E5, E6, and E7 positions are authorized for CMF 67 than can be sustained; however, they are not effectively utilized which causes significant deficiencies in E6 supervisory authorizations. For example, 52.5 percent of E3-E5 authorizations are not provided E6 technical supervision and E7 supervisors are not technically qualified as first line supervisors. Conversely, equally significant shortages exist in certain MOS and a significant shortage of E6 supervisory authorizations exist in all MOS. Furthermore, only 17.5% of TOE E6 positions have subordinates structured under the duty position. TI/QC personnel problems relate to the current inability to recognize TI force structure requirements and an inability to recognize personnel who have been trained as TI or QC supervisors.

(4) TDA ORGANIZATIONS. TDA organizations constitute only 13% of the total CMF authorizations; however, 33% of the top four grades (E6-E9), 100% of E9, 51% of E8, 29% of E7, and 33% of E6 authorizations are in TDA accounts. In view of grade reductions which are necessary in CMF 67 and existing supervisory deficiencies in the current TOE force it is imperative that a portion of the reductions be imposed on the TDA force.

(5) NEW WEAPON SYSTEM INTRODUCTION. The introduction of new weapon systems and new MOS required to operate and maintain these systems tends to complicate the considerations associated with producing an overall MOS structure which will be supportable from both a quantitative and qualitative point of view. The Tactical Transport Helicopter Repairer MOS (67T) associated with the UH-60 helicopter provides an excellent example of these problems. Authorizations for MOS 67T in the Combat Support Aviation Company (CSAC) containing 15 UH-60 helicopters are:

UH-60 CSAC (TOE 7-268T800)

	E3	E4	E5	E6	E7	TOTAL
Auth	1	2	12	9	4*	28
Percent	3.6%	7.1%	42.9%	32.1%	14.3%	100%

* Includes 67Z/W

Authorizations for a comparable CSAC with Utility Helicopter Repairers (67N) and 23 UH-1H helicopters are:

UH-1 CSAC (TOE 57-057H320)

	E3	E4	E5	E6	E7	TOTAL
Auth	8	6	30	5	4*	53
Percent	15.1%	11.3%	56.6%	9.4%	7.6%	100%

* Includes 67Z

From a baseline grade structure (67N) in which 73.6% of authorizations are at grades E5, E6, and E7 and which cannot be sustained; we have moved to an even more unsustainable structure (67T) with 89.3% of authorizations at grades E5, E6, and E7. The authorization of 9 E6 technical supervisors in the UH-60 CSAC is excessive in terms of requrements for training and supervision of 3 Skill Level 1 personnel. The force structure must include sufficient E3 and E4 positions to sustain E5 and E6 requirements and the training system must provide the necessary qualification to Skill Level 1 personnel to enable them to perform assigned duties. To do otherwise results in inventory and skill deficiencies at grades E5 and E6.

(6) NEW ORGANIZATIONAL CONCEPTS. The proposed Air Cavalry Attack Brigade (ACAB) (TOE 17-201S620 dated Apr 24 1980) was reviewed and found to be inadequate in terms of its recognition of current CMF 67 grade structure, career progression, supervisory, and training problems. It generally tends to perpetuate or exacerbate current CMF 67 deficiencies. Consequently, under current procedures, it will result in a structure in which CMF 67 grade and skill requirements cannot be met, one where AIT will not provide training for duties which graduates must perform, and where technical supervisory authorizations will be incompatible with supervisory requirements and the magnitude of unit SOJT responsibility.

(7) PROPOSED STRUCTURE. The CMF 67 authorizational structure (Table 1-1) reflects aggregate authorizations by MOS and grade for each TOE and TDA organization in the TAADS before and after application of newly developed SGA and correction of other problems. The proposed structure contains all previously recognized repairer positions (E3-E5), 60 additional TI/QC positions, and 335 additional E6 first-line supervisor positions. Changes in grade authorizations are noted below:

PROPOSED AUTHORIZATIONS

GRADE	AUTHORIZATION	CHANGE FROM CURRENT
E9	34	+16
E8	332	+10
E7	1157	-294
E6	2046	-318
E5	3690	-1599
E4	4891	+913
E3	5062	+1417
Total	17,212	+145

(8) AERIAL SCOUT OBSERVERS. Approximately 117 Aerial Scout Observers (MOS 19D2F) are authorized in Attack Helicopter Companies/Air Cavalry Troops, with an additional 440 positions identified as augmentations. Inconsistencies regarding the basis of authorization, training, and performance of aerial reconnaissance/target acquisition duties when aerial scout observers are not authorized have created problems. The more

significant problems pertain to reductions in unit maintenance capability and mobilization implications when aerial scout observer positions are identified as augmentation requirements. This results from units training for war with MOS 67V (Observation/Scout Helicopter Crew Chief) filling the requirement. However, the, positions are ostensibly filled by MOS 19D2F during wartime.

(9) HELICOPTER DOOR GUNNERS. Approximately 1630 augmentation positions for helicopter door gunners are included in current authorization documents. Door gunner positions are based upon one per authorized medium, tactical transport, and utility helicopter (excluding air ambulance aircraft) and are classified in the helicopter repair MOS appropriate to the type helicopter authorized. This results in certain inherent mobilization problems in terms of the total number of personnel required to fill these positions and the training associated with qualifying them as Skill Level 1 helicopter repairers and door gunners. These problems relate to: Where will personnel be acquired to meet mobilization requirements, are these requirements valid, and when do they receive their aircraft repairer and door gunner training in a "come as you are" war?

CMF 67
SUMMARY

MOS	CURRENT E3	E4	E5	TI* E6	S E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
66G												22	37				59
66H												13	24				37
66N												165	263				428
66T												16	20				36
66U													131				131
66V												86	145				231
66X																	
66Y												65	110				175
66 Series Total												367	730				1097
67G	59	135	375	90	75				734	145	139	85	21	52			442
67H	Included in 67G									83	82	44	13				222
67N	572	797	2217	430	228				4244	1403	1287	902	313				3905
67T	6	13	72	28	46				165	48	37	30	11				126
67U	541	317	253	85	412				1608	540	523	373	136				1572
67V	294	700	768	227	70				2059	688	646	428	128				1890
67X					6				6				4**				4
67Y	500	477	688	177	57				1899	635	641	389	154				1819
67Z						1245	322	18	1585					801	332	34	1167
67 Series Total	1972	2439	4373	1037	894	1245	322	18	12300	3542	3355	2251	780	853	332	34	11147
68B	277	246	162		61				746	263	246	176					685
68D	214	145	65		21				445	156	159	109					424
68F	150	117	89		18				374	140	130	86	38				394
68G	414	366	322		85				1187	406	396	300					1102
68H	137	65	41		5				248	72	120	51	25				268
68J	274	312	123	1	163				873	264	272	190	176	97			999
68M	207	288	114	1	78				688	219	213	160					592
68K						206			206				297	207			504
68 Series Total	1673	1539	916	2	431	206			4767	1520	1536	1072	536	304			4968
CMF TOTAL	3645	3978	5289	1039	1325	1451	322	18	17067	5062	4891	3650	2046	1157	332	34	17212

*MOS 67W redistributed into other MOS

** MOS proposed for Reserve Force only

B. **FINDINGS**.

(1) Grade sustainability and promotion adequacy are essential characteristics of MOS structural design and their implementation in the force structure is essential.

(2) Overall CMF sustainability is an unsatisfactory management tool for assessing the adequacy of MOS grade distribution and promotion opportunity.

(3) The MOS in CMF 67 currently contain a significant lack of grade sustainability and adequacy of promotion opportunity.

(4) The grade and skill requirements of the force structure cannot be met.

(5) The overall Army MOS structure (less CMF 67) also contains a significant degree of unsustainability in grade authorizations.

(6) The MTOE development process contributes to grade/MOS imbalance and poor career development.

(7) Significant variances exist in aviation authorization documents (TOE/MTOE) for similar type organizations.

(8) Current procedures relating to development and application of SGA are ineffective in providing the force developer a means of producing a grade feasible (sustainable) force.

(9) TOE/MTOE/TDA documentation reflects a wide disparity in application of ASI/SQI.

(10) TOE/MTOE/TDA reflect significant errors in application of MOS and duty title.

(11) The current procedure of fragmenting the distribution of maintenance authorizations among flight platoons, operations platoon, company headquarters, and maintenance elements is not compatible with manpower authorization criteria or unit training responsibility.

(12) Current aviation maintenance MACRIT does not adequately consider the reduced maintenance capability, reduced maintenance effectiveness, and increased technical supervisory requirements represented by the duties which recent AIT graduates must perform and the significant amount of unit MOS training required for skill level qualification.

(13) The aviation force structure provides insufficient resources to adequately accomplish the operational mission, perform appropriate maintenance, and concurrently execute an effective unit SOJT program for aviation maintenance skills.

(14) The aviation force structure fails to adequately consider training and personnel management implications.

(15) The distribution of technical supervisors in CMF 67 is unsatisfactory. Fifty-nine percent of TOE 67 series MOS E3-E5 authorizations and forty-nine percent of TOE/TDA 68 series MOS E3-E5 authorizations lack E6 technical supervision.

(16) The current Technical Inspector/Quality Control Program is unsatisfactory.

(17) TDA organizations contain an excessive share of CMF 67 supervisory (E6-E9) authorizations.

(18) Introduction of new weapons systems generally tend to exacerbate the force structuring problems noted in this study.

(19) Proposed authorizations and organizational structure of the Air Cavalry Attack Brigade does not adequately consider current CMF 67 grade structure deficiencies, career progression problems, and training responsibility.

(20) The Army Aviation Personnel Requirements for Sustained Operations Study (AAPRSO) does not adequately consider requirements for or capabilities of enlisted aviation maintenance personnel under sustained operations.

(21) The current enlisted aviation maintenance authorization structure is unsupportable in terms of grade distribution and does not effectively meet the needs of the Army.

(22) Policies relating to aerial scout observers are inconsistent with wartime requirements.

(23) The current door gunner program is incompatible with mobilization requirements.

C. RECOMMENDATIONS.

(1) Revise the aviation maintenance MOS authorizations to attain grade sustainability and adequacy of promotion opportunity for each MOS.

(2) Action be initiated to address the grade sustainability and promotion opportunity problems in MOS other than CMF 67.

(3) Subsequent changes to MOS structures and authorizations be assessed in terms of grade sustainability and promotion opportunity prior to implementation.

(4) Impose discipline on the document (TOE/MTOE/TDA) development process, in the form of regulatory guidance and managerial controls, to minimize frequency of document change, attain greater overall document standardization, espcially in like organizations, and provide for more efficient manpower utilization.

(5) Validate current criteria for the allocation of aviation maintenance personnel (MACRIT) in terms of the current training program and actual unit maintenance requirements and productivity factors.

(6) Approve the proposed enlisted aviation maintenance force structure in conjunction with associated training and personnel management recommendations.

(7) Revise TDA authorizations for aviation maintenance personnel to attain a more efficient distribution of supervisory resources.

(8) Require early recognition and resolution of manpower supportability issues associated with the acquisition of new weapon systems.

(9) Revise MOS 67T authorizations, duties, and standards of grade in accordance with data contained in Chapter 3.

(10) Ensure that proposed structures adequately recognize enlisted personnel requirements and capabilities.

(11) Approve the proposed CMF 67 authorization structure.

(12) Validate the aerial scout observer program in terms of personnel authorizations, MOS classification, training , employment, and attainment of mobilization requirements.

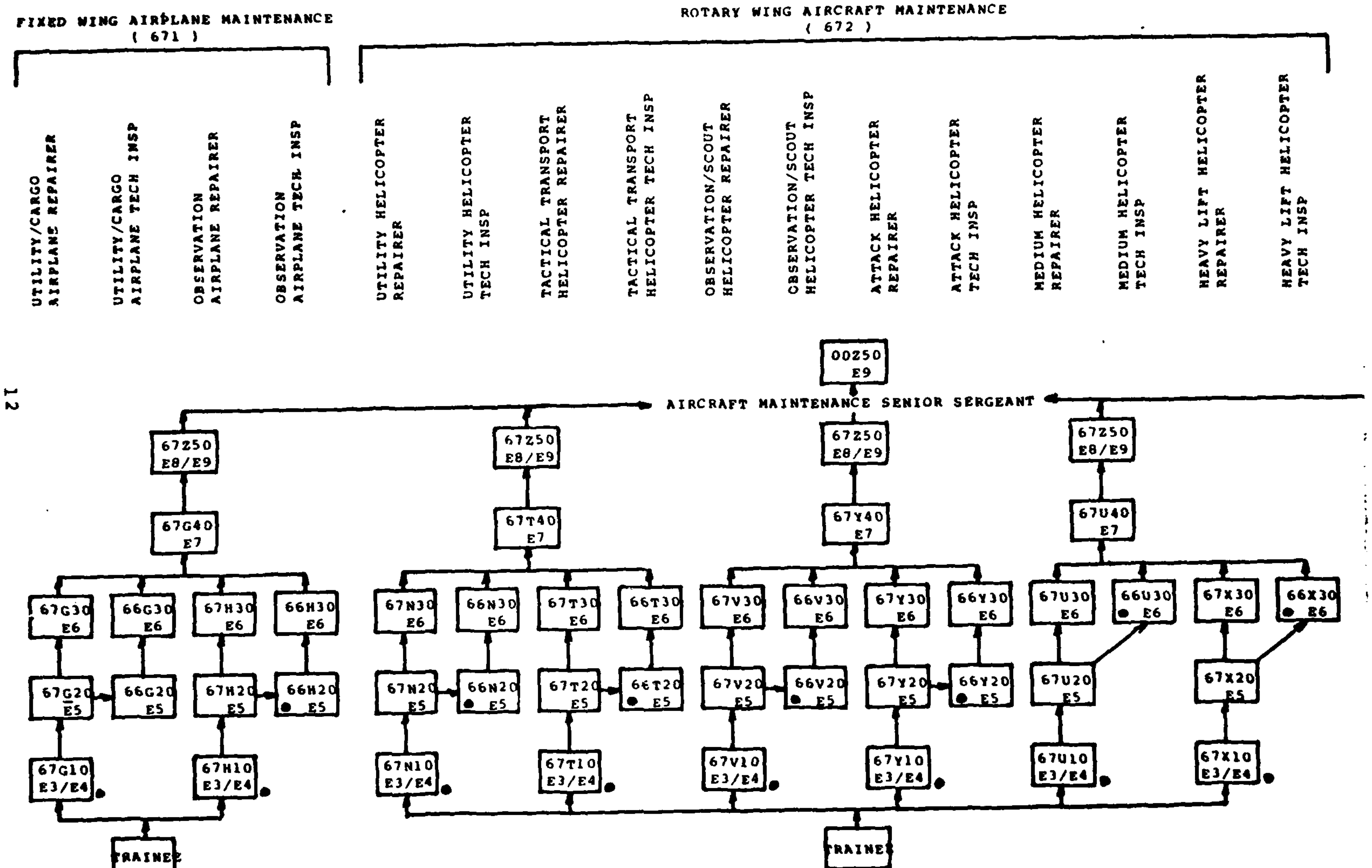
(13) Validate the current door gunner concept in terms of current and future requirements, duties, training, and ability to attain mobilization requirements.

3. PERSONNEL.

A. DISCUSSION.

(1) CMF SUBFIELD STRUCTURE. The current CMF 67 structure consists of 17 MOS grouped into two subfields under the broad categories of Aircraft Maintenance and Aircraft Component Repair. The subfield and related MOS structure results in E7 aircraft repair and quality control supervisors being assigned to first-line technical supervisory positions without regard for prior training or technical experience. For instance, personnel with only fixed wing aircraft maintenance experience through grade E6 may be assigned as Helicopter Platoon Sergeants or Helicopter Maintenance

CAREER MANAGEMENT FIELD---AVIATION MAINTENANCE (67)



SUBSTITUTABILITY: NONE

● SERVICE SCHOOL PROGRAM OF INSTRUCTION

FIGURE 1-1

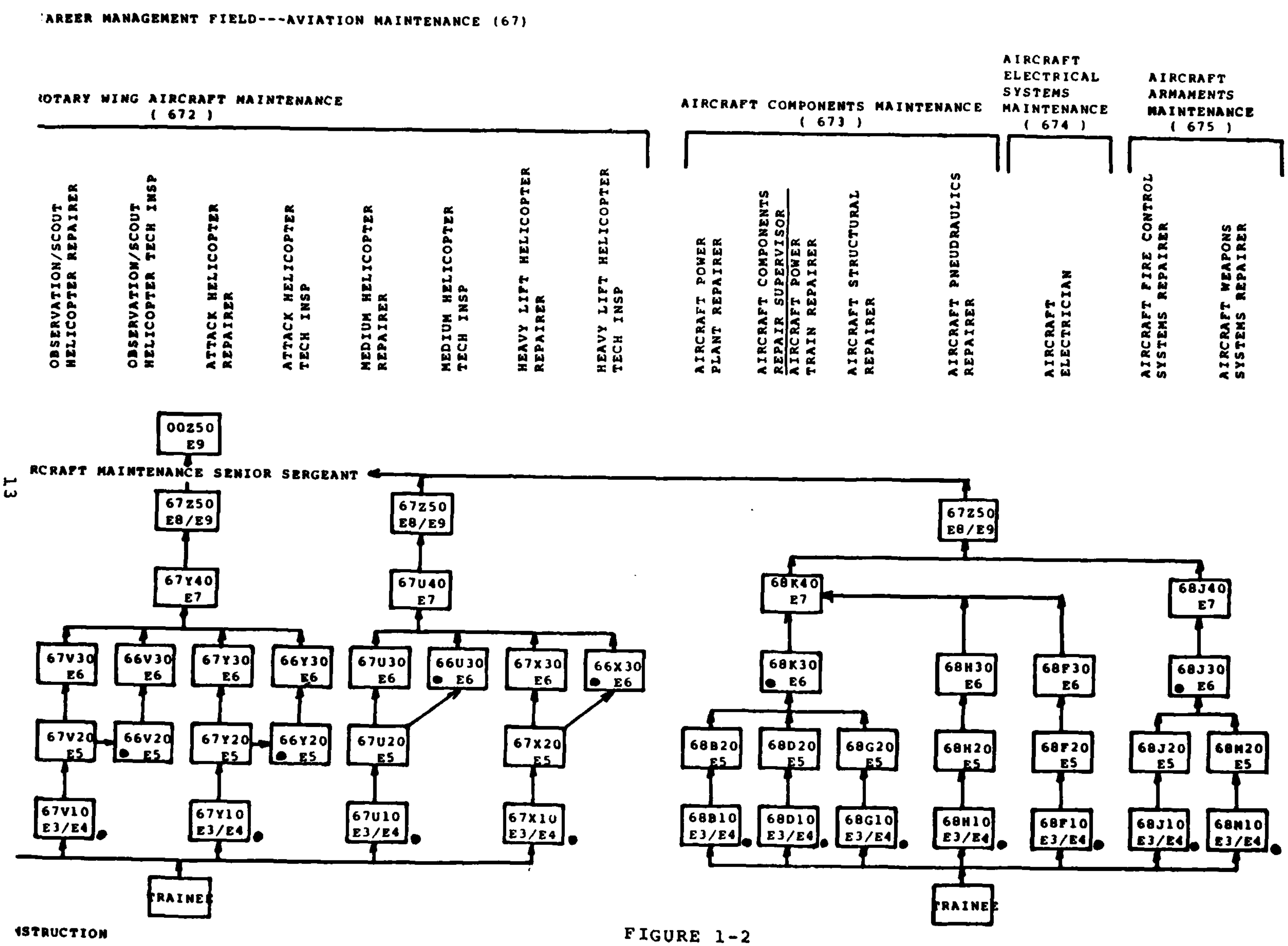

'AREER MANAGEMENT FIELD---AVIATION MAINTENANCE (67)
ROTARY WING AIRCRAFT MAINTENANCE (672)
AIRCRAFT COMPONENTS MAINTENANCE (673)
AIRCRAFT ELECTRICAL SYSTEMS MAINTENANCE (674)
AIRCRAFT ARMAMENTS MAINTENANCE (675)
OBSERVATION/SCOUT HELICOPTER REPAIRER
OBSERVATION/SCOUT HELICOPTER TECH INSP
ATTACK HELICOPTER REPAIRER
ATTACK HELICOPTER TECH INSP
MEDIUM HELICOPTER REPAIRER
MEDIUM HELICOPTER TECH INSP
HEAVY LIFT HELICOPTER REPAIRER
HEAVY LIFT HELICOPTER TECH INSP
AIRCRAFT POWER PLANT REPAIRER
AIRCRAFT COMPONENTS REPAIR SUPERVISOR
AIRCRAFT POWER TRAIN REPAIRER
AIRCRAFT STRUCTURAL REPAIRER
AIRCRAFT PNEUDRAULICS REPAIRER
AIRCRAFT ELECTRICIAN
AIRCRAFT FIRE CONTROL SYSTEMS REPAIRER
AIRCRAFT WEAPONS SYSTEMS REPAIRER
00Z50 E9
RCRAFT MAINTENANCE SENIOR SERGEANT
67Z50 E8/E9
67Y40 E7
67U40 E7
67V30 E6
66V30 E6
67Y30 E6
66Y30 E6
67U30 E6
66U30 E6
67X30 E6
66X30 E6
67V20 E5
66V20 E5
67Y20 E5
66Y20 E5
67U20 E5
67X20 E5
67V10 E3/E4
67Y10 E3/E4
67U10 E3/E4
67X10 E3/E4
TRAINEE
68K40 E7
68J40 E7
68K30 E6
68H30 E6
68F30 E6
68J30 E6
68B20 E5
68D20 E5
68G20 E5
68H20 E5
68F20 E5
68J20 E5
68M20 E5
68B10 E3/E4
68D10 E3/E4
68G10 E3/E4
68H10 E3/E4
68F10 E3/E4
68J10 E3/E4
68M10 E3/E4
ISTRUCTION

FIGURE 1-2

Supervisors as an E7. A similar condition exists with Aircraft Component Repair Supervisor (MOS 68K40) regarding their lack of technical qualification for supervision of seven diverse component repair specialties. The proposed CMF/MOS structure, which contains 5 subfields and 25 MOS, provides an enhanced ability to identify requirements, manage special skills, and more efficiently utilize technical experience. Fixed and rotary wing maintenance personnel and armament repair personnel will now remain in their respective subfields until promotion to E8. The scope of the component repair subfield is reduced from 7 to 3 MOS and includes a significantly improved technical supervisory capability. See Figures 1-1 and 1-2 for the proposed CMF/MOS structure.

(2) FIXED WING REPAIR MOS. MOS 67G (Airplane Repairer) currently identifies fixed wing aircraft repairers. Differences in aircraft covered by the MOS require all 67G trainees to receive several weeks of training in skills which about 60 percent will not be able to utilize during their first assignment. The proposed solution, which consists of splitting the current MOS into two separate MOS (67G - Utility/Cargo Airplane Repairer, 67H - Observation Airplane Repairer), results in significant savings in training resources and improvements in technical qualification of the maintenance force.

(3) TECHNICAL INSPECTORS (TI) MOS. Under the current system all personnel in grade E6 in aircraft repair MOS are considered technical inspectors and may be assigned to TI positions whether qualified for such assignments or not. Since there is no means of identifying positions requiring TI skills nor qualified TI personnel, a new 66 series MOS has been introduced for this purpose. These MOS will incorporate both TI and Quality Control duties with the Quality Control Supervisor MOS (67W) being eliminated from the structure.

(4) STANDARDS OF GRADE AUTHORIZATION (SGA). The current SGA did not produce the desired objective force. The major reasons for this confusion regarding SGA application and infeasibility of the SGA, especially at grade E5. This results in significant inventory shortages at grade E5 and necessitates personnel with limited skill and experience filling E5 positions.

(5) NEW MOS SPECIFICATIONS. MOS restructuring and duty realignment necessitated the development of new MOS duty descriptions.

(6) CURRENT INVENTORY IMPACT. A comparison of current and proposed authorizations for CMF 67 indicates:

	E3	E4	E5	E6	E7	E8	E9	TOTAL
Current TAADS	3645	3978	5289	2364	1451	322	18	17067
Proposed	5062	4891	3690	2046	1157	332	34	17212
Difference	+1417	+913	-1599	-318	-294	+10	+16	+145

that the proposed force includes an increased number of E3 and E4 positions and fewer E5, E6, and E7 positions. A comparison of proposed authorizations and current operating strength (June 79) for CMF 67 indicates:

	E3	E4	E5	E6	E7	E8	E9	TOTAL
Operating	4929	4259	4666	2521	1438	308	32	18153
Proposed	5062	4891	3690	2046	1157	332	34	17212
Difference	+133	+632	-976	-475	-281	+24	+2	-941

that in terms of the inventory, the new authorizations have a less severe impact upon grades E3, E4, and E5 and a greater impact upon grade E6. Changes at grades E3, E4, and E5 can be achieved relatively quickly; however, adjustments at E6 and E7 will require a longer period of time and necessitate careful management by the personnel community.

(7) MOS SUBSTITUTABILITY. The current substitutability rules authorize substitution at the same skill level and grade between MOS 67N (Utility Helicopter Repairer), 67V (Scout/Observation Helicopter Repairer), and 67Y (Attack Helicopter Repairer). These rules are incompatible with MOS training and MOS duty requirements.

(8) AIRCRAFT QUALITY CONTROL SUPERVISOR. The duties of the Quality Control Supervisor (QC), MOS 67W, which was established under EPMS, includes supervision of both fixed wing and rotary wing quality control programs and supervision of technical inspectors. Training for 67W was terminated at the end of FY 78. In addition the previous training program was incompatible with the MOS structure and duty position technical requirements, and 38 percent of the 67W authorizations were actually TI duty positions. These factors resulted in ineffective maintenance practices and maintenance management. Consequently, it is recommended that the MOS be eliminated and duties be incorporated into the aircraft specific TI MOS structure.

(9) UTILIZATION OF FEMALE SOLDIERS. Current policies are inconsistent regarding utilization of women in Army aviation units and MOS. Women are precluded from assignment to non-flying related MOS such as cook, clerk, or aircraft power plant repairer in Attack Helicopter and Armored Cavalry units at battalion level and below. Yet, this same policy permits assignment of women to Combat Support and Assault Support Helicopter Companies in any capacity, including crew chief/door gunner. This problem is inherent with the air crewmember's duty to perform as a door gunner on aircraft missions which may result in direct contact with hostile forces.

(10) THE ENLISTED PROMOTION SYSTEM. As a result of deficiencies in the MOS authorization structure, aviation maintenance personnel (especially those in the 67 series MOS) are being promoted to E5 as rapidly as they become eligible with waivers. Following is a comparison of Army-wide/CMF 67 promotion allocation data to E5 and E6 for FY 79:

PROMOTION ZONE	TO GRADE E5		TO GRADE E6	
	ARMY LESS CMF 67	CMF 67	ARMY LESS CMF 67	CMF 67
Primary Zone	27,429	801	11,152	725
Secondary Zone	14,905	996	7,399	47
Secondary Zone Percent	35.2%	55.4%	39.9%	6.0%

This data indicates that over one-half of CMF 67 E5 promotion allocations went to personnel with between 2 and 3 years military service compared to 35 percent for the remainder of the Army. At grade E6, CMF 67 personnel had a limited opportunity for accelerated promotion with only 6 percent of the allocations for secondary zone (SZ) promotions while 40 percent of the E6 allocations for the remainder of the Army went to personnel with 5 to 7 years of military service (SZ). This resulted in CMF 67 personnel having approximately 12 percent more total time in service (TIS) upon making E6 and 40 percent more time in grade (TIG) as an E5 than the Army wide average. For CMF 67 personnel this generally means promotion to E5 during the first enlistment with prospects at reenlistment time of extended stagnation at E5 while waiting for promotion to E6. In view of CMF 67 reenlistment data, the extended TIG at E5 and TIS while waiting for E6 appears to be more of a negative influence on reenlistment than expeditious promotion to E5 being a positive factor. Conversely, the opportunity for rapid promotion to E5 serves as an incentive to personnel in other CMF to reenlist for aviation maintenance. The Semi-Centralized Promotion System, which is used for promotion to grades E5 and E6, lacks features which enhance promotion visibility and career planning. As an example, based upon end FY 79 recommended lists and total FY 79 promotion allocations to E5 and E6, if no additions were made to the recommended lists and if promotions continue at the FY 79 rate, it would take the following period for list exhaustion:

CMF 67 RECOMMENDED LIST EXHAUSTON

MOS	TO GRADE E6 PERIOD - YEARS	TO GRADE E5 PERIOD-YEARS
67G	3.2	0
67N	2.5	0
67U	.4	.9
68B	9.4	65.0
68D	58.0	62.0
68F	15.3	2.3
68J	.5	1.4

Obviously with recommended list additions occurring monthly and with few promotion allocations, promotion probability to E6 is not a significant incentive to retention in most aviation maintenance MOS.

The proposed authorizations result in a grade sustainable structure for each MOS with a generally improved promotion opportunity to E6, E7, E8, and E9. Average TIG to E6 and average TIS to E6, E7, E8, and E9 will be reduced with the proposal.

(11) CMF 67 RETENTION AND INCENTIVES TO RETENTION. Retention of aviation maintenance personnel beyond their first enlistment is inadequate to meet force structure requirements. The net first term reenlistment rate (Percentage of first term ETS eligible personnel who reenlist for current MOS) for CMF 67 during FY 78 was 22.1% with the rate for 5 MOS being less than 20%. Compensation for potential shortfalls, resulting from the failure to retain sufficient CMF 67 personnel,is being achieved through the reenlistment of significant numbers of personnel into CMF 67 MOS from other occupational specialties. During FY 78, 42 percent of the first term careerists reenlisting for aviation maintenance actually came from other occupational specialties and possessed only limited technical qualifications resulting from AIT. In FY 79 this condition worsened with 54 percent of all first term reenlistees being migrations from other occupational specialties. This in turn means a loss of skill and experience in the MOS from which personnel are migrating, a significant retraining requirement for these personnel and a very significant loss of skill and experience in the form of CMF 67 personnel who do not reenlist. The need for additional monetary incentives to retention in CMF 67 is obscured by the current methodology for assessing SRB need and by the significant migration of first term reenlistees into CMF 67.

(12) AVIATION MAINTENANCE CONTINUATION RATES. Army wide continuation rates rather than specific aviation maintenance MOS continuation rates are used by personnel managers for strength projections and MOS structure and inventory analysis. This precludes accurate manpower assessments.

B. FINDINGS.

(1) Present subfield and MOS structure of CMF 67 is unsatisfactory and does not provide an effective means of management, training, and utilization of the enlisted maintenance force.

(2) The MACRIT for MOS 68H does not allow development of a viable career pattern and does not provide for development of required technical expertise.

(3) Consolidation of all Army fixed wing aircraft repair duties under one MOS is inefficient in terms of traning, skill retention, and manpower utilization.

(4) No means exist to identify trained TI personnel.

(5) No means exist to identify TI requirements.

(6) The current SGA did not produce a feasible grade structure and revision is required.

(7) Proposed MOS restructuring action requires new MOS specifications.

(8) Proposed MOS restructuring action will have significant impact on CMF 67 current inventory.

(9) Substitutability rules for CMF 67 are not compatible with duties, training, and field conditions for MOS indicated.

(10) The quality control function is primarily a duty of the aircraft maintenance technical inspector. Therefore, a separate MOS for the function is unnecessary.

(11) Policy on use of women in aviation units is inconsistent with that contained in Chapter 4, AR 611-201.

(12) Rapid promotion to E5 without regard to skill achievement results in an Army aviation maintenance force with less than required skills and experience.

(13) Promotion problems for E5 and E6 in CMF 67 are a direct result of current structure deficiencies.

(14) Rapid promotion of aviation maintenance personnel to E5 does not result in satisfactory retention of first term personnel.

(15) The Semi-Centralized promotion system MOS allocation process favors MOS which lack grade sustainability or feasibility.

(16) The Semi-Centralized promotion system is generally an effective and equitable system. However, certain inherent features are detrimental to job and career satisfaction.

(17) The number of aviation maintenance personnel being retained beyond their first enlistment is inadequate to meet force structure requirements. This is costly and impacts heavily upon current and extended term readiness.

(18) The sizeable number of personnel who are reenlisting for CMF 67 from other CMFs represents significant skill dissipation to the losing MOS, a major retraining expense, and contributes heavily to the skill/experience/grade mismatch in CMF 67.

(19) Current incentives to reenlistment and overall retention in aviation maintenance MOS are inadequate to meet qualitative skill and experience requirements.

(20) Increased crewmember flight pay will cause significant degradation in first term reenlistment rates for helicopter repair MOS not authorized crewmember flight pay (67V and 67Y).

(21) Future requirements for aviation maintenance personnel cannot be accurately determined because MOS continuation rates have not been developed.

C. RECOMMENDATIONS.

(1) Approve proposed subfield structure.

(2) Perform an analysis to determine the feasibility of elimination of MOS 68H from the aviation maintenance MOS structure and transfer of functions to other appropriate MOS in CMF 67.

(3) That current MOS 67G (Airplane Repairer) be split into two MOS.

(4) That US Army Transportation School revise entry level fixed wing course of instruction.

(5) Establish 66 series MOS for purpose of identifying aircraft technical inspector positions and personnel.

(6) Establish appropriate TI courses at US Army Transportation School.

(7) Consider using the TI concept outlined above for nonaviation MOS authorized excessive positions at grade E6.

(8) That proposed SGA be approved.

(9) That proponents of DA Staffing Guides revise their guidance to require use of SGA for determining grade distribution.

(10) That AR 611-201 provide more detailed guidance on use of SGA.

(11) Approve proposed MOS specifications.

(12) That MILPERCEN provide appropriate adjustment instructions to achieve personnel grade distribution to match proposed structure.

(13) Substitution rules pertaining to substitution at comparable skill levels for MOS 67N, 67V, and 67Y be changed to "None".

(14) Delete MOS 67W from MOS structure with incorporation of appropriate quality control tasks in 66 series MOS.

(15) Establish a consistent and viable policy on use of women in aviation related MOS and units.

(16) Ensure that annual female training requirements are commensurate with force structure requirements.

(17) Approve proposed structure.

(18) Revise the Semi-Centralized promotion system to provide a more objective and visible means of selecting qualified personnel for promotion to grades E5 and E6.

(19) Approve non-monetary recommendations which influence retention.

(20) Develop and employ monetary incentives to retention as required to meet aviation maintenance qualitative and quantitative requirements.

(21) Determine continuation rates for CMF 67 MOS.

4. TRAINING.

A. DISCUSSION.

(1) TRAINING DEVELOPMENT. As of the end 3d Quarter FY 1979, none of the aviation maintenance courses of instruction had been properly or completely developed under the ISD (Instructional Systems Development) process. Course design reflects a mixed system approach to development (Systems Engineering and early ISD guidance) and are conducted in either a self-paced, conventional, or mixed mode. Time constraints imposed under the EPMS Implementation Plan resulted in the priority of initial development effort being placed upon preparation of CM's (Commanders Manuals), SM's (Soldiers Manuals), and SQT's (Skill Qualification Tests). As a consequence, these items are not the product of a total ISD process and reflect haphazardly developed Terminal Learning Objectives, an inadequate job and task analysis, inadequately validated tasks, improperly developed job performance measures, and significant inconsistency between similar MOS. The critical aviation maintenance tasks described in CM and SM, excluding MOS 68J and 68M which were not reviewed, fail to recognize the duty positions which an AIT graduate must fill and consequently do not provide the graduate with the required skill and experience. In that the aviation force structure includes no helper or assistant repairer positions, this results in the AIT graduate being an immediate training burden to the receiving organization. Even more serious implications would exist under a wartime environment because mechanics would not possess the minimum skills required of the duty positions they must fill. Specific problems of CM and SM designated tasks include: Limited institutionally provided skills, inefficient distribution of training responsibility, an inadequate recognition of duty position requirements, inappropriate task redundancy among MOS, and inadequate recognition of MOS critical tasks. Current training plans fail to assess the efficacy of the total MOS training program. Missing, are assessments of the field's capability to perform

assigned MOS training, resources required to support field assigned training, time required of the field to train personnel to Skill Level 1 and 2 qualification, assessment of alternative training strategies in terms of cost/benefit relationship, the impact upon unit readiness, and capability for evaluation of overall MOS proficiency level.

(2) INSTITUTIONAL TRAINING. Current aviation maintenance AIT is essentially unchanged from that presented 5 to 7 years ago. Training was developed using System Engineering and pre-ISD processes; training is presented using self-paced, conventional, and mixed methodology; courses were not designed in support of and generally do not correlate with the CM/SM critical task lists (with the exception of instructional packages developed under civilian contract); course objectives have not been validated in terms of field requirements; courses contain training inappropriate to the MOS involved; and courses generally include no provisions for comprehensive end of course testing. A general dissatisfaction exists in the field regarding the inability of today's AIT graduates to perform the duties required of the positions they must fill. In that today's courses of instruction generally represent a greater amount of institutional training than projected by the CM for future courses of instruction, it means even greater problems in the field in the future. The most frequently heard complaints about institutional training concern self-paced training, a lack of hands-on maintenance training, inability to use maintenance manuals, and an inability to perform specific maintenance tasks required in the field. Reasons for field dissatisfaction with AIT include: An AIT program which does not qualify graduates in the duties they must perform, between an unawareness of current training concepts, an unawareness of specific unit MOS training responsibility, inconsistencies between AIT and field requirements, insufficient first-line supervisor authorizations, inadequate technical qualification of first line supervisors, significant migration of career personnel (who lack technical skill and experience appropriate to their grade) into CMF 67 from other specialties, promotion of personnel without regard to skill level attainment, rapid turnover of low ranking personnel, time delays between AIT graduation and first opportunity for on-the-job application of school acquired skills, increased complexity of new equipment, and changes in the trainability characteristics of new accessions.

(3) UNIT MOS TRAINING. The current training philosophy provides for certain aviation maintenance tasks to be taught as a part of AIT with remaining critical tasks associated with Skill Level (SL) 1 and 2 qualification being acquired in units under a supervised on-the-job training program (SOJT). The SOJT concept is, in theory so logical, simple, and potentially cost effective, that it is easy to be mislead by its apparent effectiveness. In theory, personnel are trained institutionally on those more complex, high frequency tasks which have a high probability of usage by AIT graduates during the first 6 to 12 months on the job. Graduates report to their first unit with skills appropriate to their first job assignment

and properly prepared for further training. The unit work environment, supported by technically qualified first-line supervisors who serve as trainers, provide reinforcement of previously acquired skills as well as training on the remaining tasks required for SL qualification. On the surface this concept appears to be a panacea to all training ills. It implies minimum esential non-productive time in the training base, minimum training decay associated with inability to use school acquired skills, minimum expenditure of training resources, and maximum manpower availability to field organizations where further training becomes an inherent part of normal maintenance actions. For this process to be effective, however, many essential factors must be considered. These include:

(a) Correct designation of critical tasks by MOS and SL.

(b) Adequate recognition of unit maintenance requirements.

(c) Adequate recognition of organizational structures in terms of duties associated with positions filled by new AIT graduates.

(d) Sufficient unit authorizations for technically qualified, first-line supervisors.

(e) Appropriate distribution of training responsibility in terms of unit capability.

(f) Compatability of unit training requirements and frequency at which maintenance actions occur.

(g) Appropriate distribution of dedicated resources required to support training.

(h) An assessment of time required to train to the required level of competency.

(i) An effective training program for developing technically qualified supervisors.

(j) Adequate recognition of MOS and CMF structure.

(k) Adequate understanding by commanders and supervisors of current institutional and unit training responsibility.

The factors noted above have either been excluded or not effectively included in the development of current aviation maintenance training. Consequently aviation commanders and supervisors in the field face a significant handicap in terms of mission accomplishment. It is as if the current training program was a product of reductions in resources available to support institutional training, with a resultant reduction in

institutional training and identification of all remaining training as being the responsibility of unit SOJT. The latter being mandated without adequate recognition of the skills required of AIT graduates and without any assessment of the field's capability to successfully execute SOJT requirements. The resultant program is essentially a reactive, hit-or-miss system without an effective means of providing or assessing individual technical proficiency.

SQTs were developed in the same manner as MOS critical task lists and possess their same general deficiencies. They are not based on validated job and task analysis, do not adequately reflect the duties which must be performed by an MOS at specific Skill Levels, and do not adequately correlate with current training curriculm. Resolution of SQT problems require that attention be given first to other CMF 67 problems pertaining to organizational structure inadequacies, MOS structure limitations, technical supervisory capabilities and training deficiencies. This will allow the evolution of SQTs which properly assess the state of aviation maintenance technical proficiency.

Indicators of a less than effective aviation maintenance program are readily evident in the form of increased maintenance error mishap rates, limited technical qualifications, low first term retention rates, and high personnel frustration. The magnitude of unit SOJT responsibility is not adequately appreciated. Aviation maintenance CM's reflect 71% of 67 series MOS Skill Level 1-3 critical tasks are unit SOJT responsibility. This is magnified by the number of tasks involved (194 SL 1-3 unit SOJT tasks for MOS 67Y) and by the number of MOS for which the unit has SOJT responsibility (22 in an Air Cavalry Troop). The problem is further complicated by the number of personnel requiring extensive SOJT and the rapid turnover of low ranking personnel. Approximately 34% (4431) of all Skill Level 1 and 2 aviation maintenance positions are filled by personnel who have been out of AIT for less than one year. Conversely, the CM reflect AIT as providing training on only 37 percent of the Skill Level 1 and 2 critical tasks.

B. FINDINGS.

(1) The critical tasks identified in commanders and soldiers manuals are not based upon a thorough job and task analysis, have not been properly validated, and reflect a significant degree of inconsistency and inappropriateness.

(2) AIT acquired skills as designated by aviation maintenance Commander's Manuals are inadequate to meet wartime requirements.

(3) Aviation maintenance training development plans do not effectively recognize:

(a) The aggregate interrelationships between training, personnel management, and force structure implications.

(b) Unit mission requirements and capabilities.

(c) Total training implications (Institutional and SOJT).

(4) Aviation maintenance AIT does not provide sufficient training to enable the graduate to perform the tasks required of him on the battlefield.

(5) The current CMF 67 AIT courses have not been properly developed; are not based upon an ISD process, have not been properly validated, generally include no comprehensive end-of-course testing, and are not compatible with current Commander's and Soldier's Manuals.

(6) Current CMF 67 AIT courses do not make the most effective use of training resources.

(7) The current training program is not providing sufficient, technically qualified first-line supervisors.

(8) Disparities between force structure requirements, MOS structures, and training methodology contribute to current training ineffectiveness.

(9) The aggregate aviation maintenance training program lacks effective management.

(10) The aviation maintenance training program is not providing the skills required of the force structure.

(11) The aviation maintenance unit SOJT program is uncoordinated, fragmented, and suffers from a lack of definitive guidance, coherent training strategy, and meaningful training goals.

(12) The field's ability to conduct an effective unit SOJT program is limited by:

(a) An unawareness of current institutional training curriculum.

(b) Inappropriate MOS critical task lists.

(c) The magnitude of unit SOJT requirements.

(d) The conflict between unit SOJT training requirements and other unit missions.

(e) Inadequate resources - time, equipment, and first-line supervisors.

(f) Rapid personnel turnover.

(g) A shortage of technically qualified maintenance personnel.

(h) The fragmented nature of aviation organizational structures.

(13) The overall state of aviation maintenance training is not being effectively evaluated.

(14) The current aircraft maintenance supervisors MOS (67Z40 E7) is inadequate in terms of providing technically qualified personnel to meet specific organizational training and maintenance requirements. It also ignores the need for retention of technical skills as far through a soldiers career as possible.

C. RECOMMENDATIONS.

(1) Develop a comprehensive aviation maintenance training program which includes:

(a) Priorities and milestones by MOS.

(b) Properly developed and validated MOS critical task lists.

(c) Effective distribution of training responsibility .

(d) Provisions for providing the required technical and supervisory skills at each grade level.

(e) Provisions for a comprehensive Army-wide SOJT program.

(f) Adequate resource allocation to support each mode of training.

(g) Provisions for assessing aviation maintenance training effectiveness at each level of training responsibility.

(2) Develop training plans and courses of instruction to support recommendations regarding revisions to MOS 67G, 67H, 67 series MOS BTC, 66 series MOS, 68K, 68F, 68H, 68J, and 68M.

(3) Incorporate into the MOS structure an E7 maintenance supervisors MOS, classified by R/W aircraft (67T40, 67Y40, and 67U40), and eliminate MOS 67Z40.

5. AVIATION MAINTENANCE.

A. DISCUSSION.

(1) GENERAL. Army aviation maintenance is influenced by the maintenance training program, the force structure, and the personnel management system. Consequently, the state of aviation maintenance reflects the aggregate interrelationships between these areas and represents the

resultant product of deficiencies noted in previous sections of this summary. It is the belief of this study that the Army aviation maintenance program suffers from a lack of effective management, training, and structure. The reasons are numerous and varied and must be corrected to attain and sustain an effective Army aviation capability. It should be noted that this study does not constitute a comprehensive assessment of aviation maintenance capabilities or limitations. Rather, the findings of this section are limited to an assessment of aviation maintenance issues associated with the study purpose, "---study and evaluate the personnel management program for enlisted aviation maintenance MOS series 67 and 68."

(2) ARMY AIRCRAFT MAINTENANCE ERROR. The emergence of study data indicating problems in the areas of training, force structure, MOS structure, technical qualifications of supervisors, and first term retention; resulted in a hypothesis regarding maintenance error and perceived problems. If aviation maintenance problems were being accurately perceived in terms of their relevance and magnitude, it was felt that there should be a direct correlation between these and maintenance error as an increased cause factor in aircraft mishaps (accidents, incidents, forced landings, and precautionary landings). The Army Safety Center provided a study entitled "Army Aircraft Maintenance - Error Mishap Experience" covering the period 1 January 1974 through 31 March 1979. The report is based on analysis of maintenance caused mishaps for all Army aircraft, except the TH-55 and the OH-6, and includes combined Active Army, Army Reserve, and Army National Guard experience. Data in this report indicates that maintenance error is a significant factor in the cause of aircraft mishaps and that the maintenance error mishap rate for rotary wing aircraft is increasing in an alarming manner. Of 14,732 aircraft mishaps during the study period, maintenance cause factors were present in 11.3% (1663). Of greater significance is the fact that maintenance error was present in 21.6% (92) of all accidents; in 31.9% ($35,281,004) of all costs, in 22.7% (39) of all fatalities, and 27.5% (130) of all injuries. Maintenance error mishap rates and rate of change were:

MAINTENANCE ERROR MISHAP RATES

CALENDAR YEAR

	74	75	76	77	78	1st Qtr 79
F/W	27.7	27.5	26.3	26.6	25.8	40.0
R/W	15.6	15.8	18.4	20.7	28.6	41.0
Aggregate	17.2	17.4	19.5	21.5	28.2	40.9

MAINTENANCE ERROR MISHAP RATE

TREND LINE COMPARISON

	1st Quarter CY 74	1st Quarter CY 79	Rate of Change
F/W	28.0	28.0	0
F/W	12.0	29.5	+146%

ROTARY WING MAINTENANCE ERROR MISHAP RATE

TREND LINE COMPARISON

Aircraft	1st Qtr CY 74	1st Qtr CY 79	Rate of Change
OH-58	8.0	27.0	+238%
UH-1	12.0	23.5	+96%
AH-1	49.0	68.0	+39%
CH-47	45.0	89.0	+98%

The rotary wing mishap rate which was approximately half of the fixed rate in 1974, has now surpassed the fixed wing rate. This data also indicates that the magnitude of maintenance error rate is closely associated with aircraft complexity; however, that the rate of change is not. Costs associated with maintenance error mishaps which totaled $35,281,004 reflect similar trends.

It is believed that factors such as adequacy of initial and skill development training, technical inspector identification and qualification, adequacy of repairer and supervisory authorizations and fill levels, retention of critical skills, adequacy of maintenance publications, and adequacy of working conditions are collectively; the primary cause of increased maintenance error mishap rates.

(3) AIRCRAFT MAINTENANCE. A recurring theme during this study has been the need for an effective distribution of duties to the various MOS, an effective MOS structure which supports the performance of these duties, an organizational structure which provides sufficient resources for mission accomplishment, and a training program which insures that operators, maintainers, and supervisors at all levels receive the maintenance training required by their job assignments. To achieve substantive improvements in aviation maintenance requires corrective action in the areas of training, personnel management, resource allocation, maintenance management, and command emphasis. It also requires an explicit recognition of total mission

requirements to insure that resource allocation is consistent with requirements. However, is is the opinion of this study that current aviation maintenance MACRIT factors fail to adequately recognize aviation maintenance requirements and capabilities of newly trained personnel. Attempts to determine what percentage of an aircraft mechanic's duty day was being spent performing aircraft maintenance were also unsuccessful. The current high rate of aircraft readiness appears inconsistent with other findings of this study. It is believed that aircraft readiness, and especially sustained readiness is significantly less than reported. This results, not from intentional erroneous reporting, but rather from a lack of necessary technical qualifications on the part of personnel making or contributing to equipment availability assessments.

B. FINDINGS.

(1) Army aircraft mishaps caused by maintenance error resulted in a significant resource loss - $35,281,004, 39 fatalities, and 130 injuries during the CY 74 - 1st Quarter CY 79 period.

(2) The rotary wing aircraft maintenance error mishap rate increased by 146% during the CY 74 - 1st Quarter CY 79 period.

(3) A significant portion of maintenance errors were committed by technical inspectors and supervisors - 24%.

(4) Maintenance errors have a significant impact upon sustained unit readiness.

(5) The overall Army Aviation Maintenance Program lacks effective management. Deficiencies reflect aggregate shortcomings of the personnel management system, aviation maintenance training, and force structure.

(6) The tasks required of aviation maintenance personnel exceed the capabilities provided by the current training program.

(7) The skill development of enlisted aviation maintenance personnel is hindered by requirements to perform non-maintenance related duties.

(8) The organization for aviation maintenance, particularly at AVUM level, does not contribute to an effective maintenance program.

(9) The study was unable to validate current MACRIT data; however, it is felt that manpower authorization criteria for CMF 67 personnel do not adequately recognize field conditions.

(10) The reported high state of unit readiness and equipment availability is in contradiction with findings pertaining to training, personnel management, and force structuring.

(11) The maintenance of aviation life support equipment (ALSE) remains an unresolved issue.

C. RECOMMENDATIONS.

(1) Continue analysis of aviation maintenance error mishap rates as to specific cause factors and make greater usage of this data in the overall management of aviation maintenance and maintenance training.

(2) Approved associated recommendations of this study which impact upon enhanced training, personnel management, and force structure.

(3) Establish responsibility for development and implementation of a program to improve Army aviation maintenance.

(4) Validate MACRIT for CMF 67 based upon actual field experience and requirements.

6. NONAVIATOR FLYING STATUS.

A. DISCUSSION.

(1) GENERAL. Nonaviator flying status for enlisted personnel is a many faceted program that is under an umbrella of Public Law, Executive Order, DOD Directives, and Army Regulations to provide monetary incentives to attract and retain personnel to meet manpower requirements in Army aviation programs. Historically, the Army has been able to obtain sufficient volunteers from the enlisted forces to meet enlisted flight duty position requirements. However, in this era of decreasing manpower availability, increasing costs, changing military doctrine, and increased training requirements, a reassessment of the program is warranted to insure the Army's continued ability to meet manpower requirements, while at the same time, reducing personnel turbulence and keeping program costs to the minimum level necessary to attract and retain required personnel. The majority of enlisted personnel consider flight status as a combination of positional pay that is keyed to specific duty position titles, as recognition for being capable of doing the job required, and as a hazardous duty pay; while public law and congressional edict defines flight pay as a dual function entitlement that is made up of Incentive and Hazardous Duty Pay Elements. To an increasing segment of the enlisted force, many factors are viewed as being inequitable and impact on the individuals morale and willingness to participate in the Nonaviator Flight Status Program. An area of concern involves the enlisted members inability to plan ahead when considering the monetary aspects of the flight status program. Under the current program authorizations for enlisted flight status are valid only while the individual is assigned to a specific duty position within a specific unit. Any change of duty position or unit requires revalidation of the individual's flight status authorization regardless of the reason for the

change. In many cases the acceptance of pormotion from E5 to E6 will necessitate termination from flight status, due to duty position change, and would result in a reduction of total entitlements. These factors when compared to the policy of continued flight pay for rated aviators, regardless of unit of assignment or duty position held, is a source of irritation to most enlisted personnel. Numerous problems are attributable to the often outdated, vague, fragmented, and contradictory guidance contained in AR 600-106. This, when coupled with the absence of documentation in The Army Manpower Authorization Documents (TAADS) has led to diverse interpretations of nonaviator flying position authorizations and a total lack of aggregate audit capability.

(2) NONAVIATOR CREWMEMBER FLYING STATUS. Personnel in CMF 67 are authorized nonaviator crewmember status on the basis of MOS qualification in a specific category of aircraft and by duty position title. For other personnel, crewmember flight status is primarily based on performing specific duties. The use of general criterion; without guidance being provided to identify the specific duties, training, and type of mission that qualify for award of crewmember flight status, has led to diverse interpretation and application of regulatory guidance. This problem is exacerbated by a lack of correlation between duty position titles in AR 600-106, AR 611-201, and those used in authorization documents (TOE/MTOE/TDA). The failure to appropriately document crewmember positions in TAADS precludes an assessment of total requirements and denies program managers an accurate means of projecting budgetary requirements and assessing program results.

(3) NONAVIATOR NONCREWMEMBER FLYING STATUS. The majority of personnel authorized Nonaviator Noncrewmember flight status hold MOS in CMF 67. Unlike crewmember flight status where all authorizations are based on the same criteria, noncrewmembers are identified in four ways; duty position titles only, duty position and aggregate number of aircraft assigned to unit concerned, on only the aggregate number of aircraft assigned, and by the specific duties to be performed. As with crewmember authorizations, the use of duty position titles in AR 600-106 that are not aligned with those of AR 611-201 and manpower authorization documents (TOE/MTOE/TDA) leads to diverse interpretations of noncrewmember authorizations. Furthermore, the lack of definitive quidance regarding duties that qualify for award of flight status; the lack of documentation in TOE, MTOE, and TDA to positively identify authorized flight status positions; and the contradictory authority to award either crewmember or noncrewmember status to certain supervisors or air observers, dependent on unit of assignment, duty position, and MOS; results in even more diverse authorizations. The lack of an audit capability makes it impossible for program managers, other than at the unit level, to determine the total number of personnel authorized noncrewmember flight status. This in turn precludes an accurate assessment of manpower or budgetary requirements.

B. FINDINGS.

(1) The nonaviator flight status program is uncoordinated, fragmented, and lacks centralized management.

(2) Regulatory guidance is outdated, confusing, contradictory, and inequitable.

(3) Requirements and authorizations are not properly documented.

(4) Personnel authorizations of AR 570-2 are not in concert with flight status authorizations of AR 600-106.

(5) Lack of an aggregate audit capability precludes effective management in terms of programming for personnel and budgetary requirements.

(6) Noncrewmember flight status is used to a significant degree as an incentive without regard for the necessity to perform essential duties in flight, resulting in a significant loss of potential maintenance manhours.

C. RECOMMENDATIONS.

(1) Conduct a thorough assessment of all nonaviator positions whose incumbents are required to participate in frequent and regular aerial flight in the performance of their duties.

(2) Authorize flight duty entitlement for qualified personnel filling documented flight status positions.

(3) Align authorizations of AR 600-106 with MACRIT data of AR 570-2.

(4) Document requirements and authorizations in the manpower authorization documents (TOE/MTOE/TDA).

(5) Develop an audit capability to insure compliance with manpower and budgetary limitations.

(6) Revise AR 600-106 (Aeronautical Designations and Flying Status for Army Personnel).

7. RESERVE COMPONENTS (RC).

A. DISCUSSION. The discontinuation of the draft has resulted in significant RC recruiting and retention problems. The CMF 67 Study recommends adjustments to CMF 67 MOS and authorization documents which result in significant increases in grades E3 and E4 and similar reductions in E5, E6, and E7 authorizations. Since US Army Reserve units are organized under the same authorization documents as the Active Army (AA), imposition

of widespread grade reductions in RC units would exacerbate recruiting and retention problems. It appears appropriate to continue using the same unit organizational structure for both RC and AA. Use of the same grade structure does not appear appropriate if it is desired that skilled AA ETS losses serve as potential source of RC accessions.

B. FINDING.

Reserve Components face increased problems in recruiting and retention of aviation maintenace personnel as a result of proposed CMF 67 restructuring.

C. RECOMMENDATION.

Approve proposed CMF restructuring; however, provide authority for RC organizations to maintain 40% overstrengths in CMF 67 in grades E4, E5, E6, and E7. This increased grade distribution will not change total strength authorizations.

CHAPTER 2

INTRODUCTION

CONTENTS

CHAPTER 2

INTRODUCTION

1. BACKGROUND. The year 1980 marks the eighth year since the end of the Vietnam era, a period during which Army aviation technical competence was at its zenith. There is growing evidence of a significant decline in aviation maintenance effectiveness and technical competence during the ensuing period. Reasons for this decline, which appear to be real rather than perceived, are many and varied. They include an inadequate organizational structure, an ineffective MOS structure, inappropriate grade authorizations, unsatisfactory retention of aviation maintenance personnel beyond their first enlistment, a training program which does not provide the required skills, increased equipment complexity, and other less obvious factors. These issues are explored in this study. Chapter 3 examines force structure implications, Chapter 4 analyzes personnel management considerations, Chapter 5 reviews the training system, and Chapter 6 pertains to aviation maintenance itself. The remaining two chapters involve a discussion of non-aviator flight status and Reserve Component implications.

The Army Aviation Maintenance Career Management Field (CMF) 67 Study is an outgrowth of the March 1978 Army Aviation Employment Conference (AVNEC) at Fort Rucker, Alabama. The Conference noted that retention rates for some occupational specialties were below desirable levels and that an infeasible grade structure existed in CMF 67. They further recommended formation of a task force to review the grade structure of Army aviation units. Consequently, on 15 March 1979, the CMF 67 Special Study Group (SSG) convened under the authority of HQDA Letter 600-78-7, dated 2 January 1979 (See ANNEX A). The SSG was charged with conducting an in-depth evaluation of the 17 aircraft repair and aircraft component repair MOS which constitute CMF 67 and with providing appropriate recommendations regarding problem resolution (See ANNEX B for SSG Charter). The study was sponsored by the Office of Deputy Chief of Staff for Logistics with SSG membership comprised of personnel from the HQDA staff and major commands (See ANNEX C for SSG Membership).

2. STUDY PURPOSE. In accordance with the tasking directive, the SSG was "To study and evaluate in-depth current force structure for CMF 67 and develop innovative management techniques to facilitate resolution of problem areas." This purpose was predicated upon the tasking directive problem statement which indicated, "The EPMS objective force design for CMF 67 has not materialized in the PERSACS authorization documents either because the major commands have not applied the Standards of Grade Authorization (SGA) developed under EPMS or the SGA is invalid. The current force structure contains an infeasible grade structure for grades E-5 and below and poor promotion opportunity from grade E-5 to E-6. To allow this to continue can only cause by-grade shortages, increased training costs, and reduced unit readiness." As noted in subsequent paragraphs; the problem statement, study

purpose, and study scope tended to limit the study to personnel management considerations and were generally incompatible with study objectives. Consequently the study objectives and scope were modified by the Study Steering Committee to more accurately reflect the potential problems of CMF 67 and recognize time and manpower resources available to the SSG.

3. STUDY OBJECTIVES.

A. Develop a grade feasible structure for TOE/MTOE/TDA aviation units that considers today's budget and force content constraints.

B. Achieve appropriate MOS promotion opportunity.

C. Provide authorization for necessary first-line supervisors.

D. Develop appropriate Standard of Grade Authorization (SGA).

E. Provide recommendations relative to CMF 67 training which enhance individual proficiency and unit readiness.

F. Provide recommendations regarding the effect of planned force structure changes upon CMF 67 during the 1981-1985 time frame.

G. Validate enlisted flight pay entitlements.

4. STUDY SCOPE. The study scope identified in the study directive was "To conduct a detailed/in-depth study/analysis of the personnel management concept and program for CMF 67 under EPMS. Recommendations must be feasible in that unrealistic changes to Army policy or the force structure should not be made. Application to other EPMS career fields should be considered." The SSG determined this scope to be primarily oriented toward personnel management considerations and solutions and overly restrictive in terms of full recognition and resolution of CMF 67 problems. Consequently the Study Steering Committee modified the scope to provide the necessary latitude to fully identify training, personnel management, and force structure factors which were influencing problems in CMF 67.

5. STUDY LIMITATIONS. It should be recognized that this study does not constitute a complete assessment of aviation maintenance or aviation maintenance training. In accordance with study objectives, resources available to the study, and other guidance; the review of training and maintenance were limited to the degree required to identify the nature of the problems impacting upon CMF 67. For instance, the SSG desired to perform a comprehensive analysis of Manpower Authorization Criteria (MACRIT) factors in terms of their adequacy, the degree to which they recognize maintenance requirements in the field, and the technical capability of the work force. It would also have been desirable to provide a complete list of deficiencies for each course of instruction along with a detailed list of

skills which should be provided by institutional training. However, as noted in Chapter 5, this entails an involved process which includes the development of appropriate critical tasks for each MOS and an expenditure of resources beyond those available to the SSG. In a like manner, the SSG desired to include other aviation related MOS (CMF 28 - Aviation Communication Electronics Systems Maintenance, MOS 71P - Flight Operations Coordinator, MOS 93E - Meteorological Observer, MOS 93H - ATC Tower Operator, and 93J - ATC Radar Controller) in the study, however, resource constraints precluded their consideration.

It should also be recognized that the study objectives noted in paragraph 3 above, limit the possible solutions available to the Study Group. For example paragraph 3A requires development of a sustainable grade structure within current and projected CMF 67 end strength allocations. This in turn necessitates significant reductions in E5, E6, and E7 authorizations.

6. STUDY METHODOLOGY. Initial efforts were directed toward education of the SSG in terms of current policies and procedures and accurate identification of the problem and factors influencing the problem. The methodology employed was essentially one of developing a dendritic structure which identified the factors influencing aviation maintenance and aviation maintenance personnel. This structure also served as a means of identifying the synergistic factors involved. This resulted in an early realization that central to all CMF 67 problems was the current failure to adequately recognize the aggregate interrelationships between personnel management, force structure, and training implications.

Using these principles, the SSG reviewed the following areas in terms of their impact upon aviation maintenance, aviation maintenance personnel, and each other.

A. Training System

B. Personnel Management System

C. Current and Projected Force Structure

D. Aviation Maintenance Concepts

E. Unit Mission

F. Aviation Unit Readiness

G. Commander, NCO, and Subordinate Perceptions

H. Overall Management

I. Other Service Procedures.

This resulted in a definitive problem statement and became the basis for determining time and other resources required to support data collection and analysis. The study itself involved a line-by-line analysis of the 17,067 CMF 67 positions in the force structure, a detailed review of the requirements of these positions, and an assessment of the ability of the personnel management and training systems to support these requirements.

7. STUDY FINDINGS AND RECOMMENDATIONS. Findings and recommendations are reported by functional area and are located at the end of each chapter. To attain the full potential of Army aviation maintenance, it is essential that the interdependence and interaction between the major functional areas and their respective findings and recommendations be thoroughly recognized.

It should be noted that the Study Recommendations represent, within study constraints, the Study Groups assessment of how best to resolve problems in the Enlisted Aviation Maintenance Career Management Field. They do not represent the only methods of resolution and may not represent the most effective means once all assessments are completed. The Study Group has not conducted all of the in-depth assessments required for implementation and certain recommendations are noted as being conditional based upon the results of further essential analysis. Therefore the Study is not an Implementation Plan. This is a proponent responsibility and the Study Group has neither the expertise nor resources for accomplishment. While conducting the assessments required of a comprehensive, time phased plan, proponents may identify within resource constraints and overall Army priorities, improved means of addressing CMF 67 problems. Consequently, the recommendations are not sacrosanct. What is important is recognition of the significant problems which exist in CMF 67 and realization that an accurate understanding of their interaction and interdependence is essential to problem resolution.

ANNEX A

DEPARTMENT OF THE ARMY HQDA Ltr 600-78-7
OFFICE OF THE ADJUTANT GENERAL AND THE ADJUTANT GENERAL CENTER
WASHINGTON, D.C. 20314

DALO-AVN (M) (26 Dec 78) 2 January 1979

Expires 2 January 1980

SUBJECT: Enlisted Personnel Management System (EPMS) Career Management Field (CMF) 67 -- Enlisted Aviation Maintenance MOS Series 67 and 68 -- STUDY DIRECTIVE

SEE DISTRIBUTION

1. Purpose. This directive provides for the establishment of a Special Study Group (SSG) to thoroughly study and evaluate the personnel management program for enlisted aviation maintenance MOS series 67 and 68.

2. Study title. Enlisted Personnel Management System (EPMS) Career Management Field (CMF) 67 -- Enlisted Aviation Maintenance MOS Series 67 and 68.

3. Background.

a. Career Management Field 67 is one of 35 career fields which make up the Enlisted Personnel Management System (EPMS). Included in CMF 67 are MOS 67 and 68 -- aircraft repairman/crewchief and component repairman, respectively. By design, a CMF represents a grouping of related MOS that are self-reviewing and can be meaningfully managed in terms of both manpower and personnel considerations. However, because of the current grade structure imbalance in CMF 67, this fundamental management concept cannot be effectively implemented. This imbalance in the grade structure prohibits the development of a sufficient trainee base and first term personnel requirement to support a grade by grade promotion flow in either MOS 67 or 68. Consequently, poor selectivity/promotion opportunity adversely impacts on the morale and professionalism of aviation enlisted personnel which ultimately degrades mission accomplishment.

b. Graphically portrayed, a feasible grade structure resembles a pyramid in shape, a large number of lower graded authorizations at the bottom and a progressively smaller number of higher graded authorizations at the top. The relative large number of lower graded authorizations that progressively decreases with added rank are necessary to offset normal attrition, assure promotion selectivity, and provide the personnel necessary for the overhead account (transits, hospital, etc.). Unfortunately,

SUBJECT: Enlisted Personnel Management System (EPMS) Career Management Field (CMF) 67 -- Enlisted Aviation Maintenance MOS Series 67 and 68 -- STUDY DIRECTIVE

CMF 67 has an aberrant grade cell or diamond shaped grade structure (large middle cell), making effective management of the enlisted aviation maintenance force extremely difficult.

c. The enlisted aviation maintenance program was a topic of discussion at the General Officer Aviation Employment Conference (AVNEC) conducted at the US Army Aviation Center in March 1978. Aware of the impact existing personnel management problems have on mission capability of aviation units, the AVNEC strongly recommended that an in-depth study of CMF 67 be conducted at HQDA to determine what actions must be taken to resolve this critical issue. Accordingly, appropriate steps were taken to establish a HQDA Special Study Group.

4. Study sponsor. Deputy Chief of Staff for Logistics. The action office within ODCSLOG is the Aviation Logistics Office (DALO-AV).

5. Study agency. Department of the Army in-house study with study group membership comprised of personnel from the HQDA Staff and major and subordinate commands.

6. Terms of reference.

a. Problem. The EPMS objective force design for CMF 67 has not materialized in the PERSACS authorization documents either because the major commands have not applied the Standard of Grade Authorizations (SGA) developed under EPMS or the SGA is invalid. The current force structure contains an infeasible grade structure for grades E5 and below and poor promotion opportunity from grade E5 to E6. To allow this condition to continue can only cause by-grade shortages, increased training costs and reduced unit readiness.

b. Purpose. To study and evaluate in-depth current force structure for CMF 67 and develop innovative management techniques to facilitate resolution of problem areas.

c. Study objectives.

(1) Develop a grade-feasible structure for TOE/MTOE/TDA aviation units that considers today's budget and force content constraints.

(2) Determine validity of Standard of Grade Authorizations (SGA) application for CMF 67.

(3) Determine potential of orienting Army aircraft maintenance concepts toward the component system approach.

SUBJECT: Enlisted Personnel Management System (EPMS) Career Management Field (CMF) 67 -- Enlisted Aviation Maintenance MOS Series 67 and 68 -- STUDY DIRECTIVE

(4) Evaluate training program standards relative to Army requirements.

(5) Identify and evaluate effects of current and planned force structure changes on CMF 67 soldiers.

(6) Determine validity of Title 37 entitlements for enlisted aviation incentive pay.

(7) Evaluate training and sustainability standards for Individual Ready Reserve (IRR) aviation maintenance personnel.

d. Scope. To conduct a detailed/in-depth study/analysis of the personnel management concept and program for CMF 67 under EPMS. Recommendations must be feasible in that unrealistic changes to Army policy or the force structure should not be made. Application to other EPMS career fields should be considered.

e. Limitations/Constraints. The study effort should be limited to concepts, conclusions and recommendations within the present organization and command structures.

f. Timeframe. Conclusions and recommendations will be applicable to the FY 79-84 timeframe.

g. Assumptions.

(1) Current force structure will remain relatively constant in terms of number of people and unit reorganizations -- both active and reserve.

(2) Training programs and standards will not drastically change.

(3) Mobilization plans will remain basically unchanged.

h. Models. Use of computer programs and models will be maximized.

i. Essential elements of analysis. See paragraph 6c.

j. Environmental/threat guidance. No environmental consequences are envisioned; however, the SSC is required to surface and address any environmental considerations that develop in the course of the study effort.

k. Estimated cost savings. SSG charter to formulate improved personnel management policy should result in cost savings via higher retention rates in CMF 67 and reduced training requirements.

SUBJECT: Enlisted Personnel Management System (EPMS) Career Management Field (CMF) 67 -- Enlisted Aviation Maintenance MOS Series 67 and 68 -- STUDY DIRECTIVE

7. Responsibilities.

a. The Office of the Deputy Chief of Staff for Logistics is responsible for exercising Army Staff supervision over the study effort.

b. Heads of organizations listed in paragraph 8 will:

(1) Furnish representation to the SSG as required.

(2) Provide the name, address, and telephone number of nominees for assignment to Steering Committee or SSG as appropriate to DCSLOG, ATTN: DALO-AV (LTC Tom Walker/697-0487, AUTOVON 227-0487) by 15 January 1979.

(3) Steering Committee and SSG perform those functions specified in AR 5-5 (The Army Study System).

8. Literature search.

a. Organizations which have responsibility for, or interest in, the subject matter of the study are as follows:

(1) Office, Secretary of the Army: Assistant Secretary of the Army (Installations, Logistics and Financial Management).

(2) HQDA, DCSPER.

(3) HQDA, DCSOPS.

(4) HQDA, DCSLOG.

(5) TRADOC.

(6) FORSCOM.

(7) USAREUR.

(8) US Army, Eight.

(9) DARCOM.

b. The SSG is charged to identify resources/studies and use them as appropriate. Initial background data regarding enlisted personnel career development, particularly CMF 67, may be obtained from the EPMS Task Force, US Army Military Personnel Center.

c. A detailed search of DDC and US Army Library files failed to disclose any past or on-going studies related to CMF 67.

SUBJECT: Enlisted Personnel Management System (EPMS) Career Management Field (CMF) 67 -- Enlisted Aviation Maintenance MOS Series 67 and 68 -- STUDY DIRECTIVE

9. References.

AR 5-5

AR 40-501

AR 95-1

AR 600-106

AR 600-200

AR 601-210

AR 601-280

AR 611-201

AR 611-202

AR 614-200

DA Pamphlet 611-8

DA Pamphlet 624-1

DA Circular 611-61

DA Circular 611-65

10. Study composition.

a. The SSG will function under the direct control of a Steering Committee. The SSG Steering Committee will consist of a general officer or senior field grade officer from ODCSLOG, ODCSOPS, ODCSPER, MILPERCEN, FORSCOM, RCPAC and USAREUR. Chairman of the Steering Committee is authorized to task commands and agencies through respective committee members for specific input. Representative from ODCSLOG will serve as Chairman of the Steering Committee. Assignment to the Steering Committee will be on an on-call basis; however, Study Group membership will be full-time.

b. Study Group members will consist of representatives from the following organizations:

(1) Office of the Deputy Chief of Staff for Personnel (one officer in grade of 06 or 05(P)).

(2) US Army Military Personnel Center (one officer in grade of 05 or 04 or civilian equivalent).

(3) Office of the Deputy Chief of Staff for Operations and Plans (one officer grade of 05 or 04).

(4) Office of the Deputy Chief of Staff for Logistics (one officer grade 05 or 04).

(5) Office of the Chief, Army Reserve (one officer grade of 05 or 04).

(6) US Army Training and Doctrine Command (one officer grade of 05/04 or senior NCO).

(7) US Army Forces Command (one officer grade of 05/04 or senior NCO).

(8) US Army, Europe (one officer grade 05/04 or senior NCO).

c. Chairman of study group will be senior Colonel or Lieutenant Colonel (promotable) SSG member.

d. In the case of FORSCOM, TRADOC and USAREUR, SSG members may also serve as a representative on the Steering Committee.

e. The Steering Committee will operate under the Staff supervision of the DCSLOG.

11. Administration.

a. Support.

(1) TDY, per diem and civilian overtime costs of group members -- both Steering Committee and SSG -- will be funded by the parent organization of the individual concerned.

(2) Arrangements for administrative personnel support (one secretary and one clerk typist) will be made via coordination between ODCSLOG and DACS-DSA with clerical support furnished on an as available basis.

(3) Logistical support (office space, desks, chairs, telephones, etc.) will be provided by DCSLOG.

b. Milestone schedule. Major milestones are shown below. Detailed schedules will be developed by the study group as part of the study plan.

(1) Proposed date for convening study group: 1 February 1979.

(2) In Process Review with Steering Committee: 15 February 1979.

(3) In Process Review with Steering Committee: 16 March 1979.

(4) In Process Review with Steering Committee: 13 April 1979.

(5) In Process Review with Steering Committee: 19 May 1979.

(6) Draft Report to Steering Committee: 17 June 1979.

(7) Issue Resolution Memorandum to VCSA: 10 July 1979.

c. Control procedures.

(1) SSG Steering Committee will control the study effort with representatives from agencies addressed in paragraph 10.

(2) Draft of final study report will be staffed with interested HQDA Staff agencies and participating organizations.

d. Study format or outline. As determined by the SSG.

e. Action documents. A draft memorandum to the VCSA recommending issue resolution as supported by the study results.

BY ORDER OF THE SECRETARY OF THE ARMY:

J. C. Pennington

J. C. PENNINGTON
Brigadier General, USA
The Adjutant General

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SUBJECT: Enlisted Personnel Management System (EPMS) Career Management Field (CMF) 67 -- Enlisted Aviation Maintenance MOS Series 67 and 68 -- STUDY DIRECTIVE

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BKS	TA	SM
ZX	LE	SM1
ZXT	TSM	SMS
ZXA	TST	SMM
TUCI	TSE	SMW
AV	TSP	
PL	TS	
PLH		
PLF	SA	
PLC		RMP

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INFO RUCLHTB/CDRUSAFORSCOM FT MCPHERSON GA //AFPR-MPS/
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UNCLAS
SUBJ: EPMS CAREER MANAGEMENT FIELD (CMF) 67 -- MOS SERIES 67 AND 68 -- STUDY DIRECTIVE
A. HQDA LTR 600-78-7, DALO-AV, SUBJECT SAME AS ABOVE, 2 JAN 79.
THIS MESSAGE IN TWO PARTS
PART I FOR ALL
1. REF A IS A STUDY DIRECTIVE WHICH ESTABLISHES A SPECIAL STUDY GROUP (SSG) TO THOROUGHLY STUDY AND EVALUATE THE PERSONNEL MANAGEMENT PROGRAM FOR ENLISTED AVIATION MAINTENANCE MOS SERIES 67 AND 68.
2. RECENT CONFLICTS IN SCHEDULING PERSONNEL TO SERVE AS MEMBERS OF SSG 67 HAVE RESULTED IN A NEED TO MAKE MINOR CHANGES TO MEMBERSHIP REQUIREMENTS AND ADJUSTMENTS IN MILESTONE DATES. ACCORDINGLY, THE FOLLOWING CHANGES TO HQDA LTR 600-78-7 (REF A) ARE ANNOUNCED EFFECTIVE UPON RECEIPT OF THIS MESSAGE:
A. PARA 7B(2): CHANGE SUSPENSE DATE TO 9 MARCH 1979.
B. PARA 10 (STUDY COMPOSITION):
(1) PARA 10B(1): CHANGE TO READ, "OFFICE OF THE DEPUTY CHIEF OF STAFF FOR PERSONNEL (ONE OFFICER GRADE OF 06 OR 05).
(2) PARA 10B(6): CHANGE TO READ, "US ARMY TRAINING AND DOCTRINE COMMAND (ONE OFFICER GRADE OF 05/04 OR SENIOR NCO OR CIVILIAN EQUIVALENT).
(3) PARA 10C: CHANGE TO READ, "SENIOR SSG MEMBER WILL BE DESIGNATED AS STUDY GROUP CHAIRMAN.
C. PARA 11B (MILESTONE SCHEDULE): DATE FOR CONVENING SSG HAS BEEN ADJUSTED BY APPROXIMATELY 45 DAYS TO 15 MARCH 79. ALL SUBSEQUENT MILESTONE DATES IN PARA 11 SHOULD BE ADJUSTED ACCORDINGLY.

PENTAGON TELECOMMUNICATIONS CENTER

ONCE SSG CONVENES, MILESTONE DATES ARE SUBJECT TO CHANGE AT THE DISCRETION OF BOTH THE STEERING COMMITTEE AND SSG.
PART II FOR TRADOC
3. REF PARA 2B(2) ABOVE, REQUEST CONSIDERATION BE GIVEN TO SELECTION OF SGM KENNY DESKINS, ATSP-DT, FORT EUSTIS, AS THE TRADOC SSG MEMBER. REQUEST IS PREDICATED ON HIS EXTENSIVE BACKGROUND IN AVIATION MAINTENANCE AND EXPRESSED DESIRE TO SERVE AS A STUDY GROUP MEMBER.
4. HQDA POC IS LTC TOM WALKER, DALO-AV, AUTOVON 227-0487.
BT
ACTION ADDRESSEES
099 ARSTAF A (DA MEMO 105-1 APPLIES)
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ANNEX B

CHARTER OF THE SPECIAL STUDY GROUP

1. PURPOSE. This Department of the Army Charter establishes the EPMS Career Management Field 67 (Enlisted Aviation Maintenance MOS Series 67 and 68) Special Study Group (SSG) and specifies the mission, authority and responsibilities of the group.

2. SPECIAL STUDY GROUP. Effective 2 January 1979, the Special Study Group is established within the Office of the Deputy Chief of Staff for Logistics. The Study Group Steering Committee is comprised of seven members and under the chairmanship of Mr. Joseph P. Cribbins, Special Assistant to the Deputy Chief of Staff for Logistics and Chief, Aviation Logistics Office. BG Carl McNair, Deputy Director of Requirements and Army Aviation Officer and BG Henry Doctor, Director of Enlisted Personnel will serve as committee deputy chairmen. The Study Group operates out of Room 1 E 570, Pentagon, Washington, D. C. 20310.

3. MISSION.

a. Study and evaluate the Enlisted Aviation Maintenance Career Management Field 67 and provide findings and recommendations at the conclusion of the evaluation to the VCSA for approval.

b. Within the capabilities and tenure of the Special Study Group, Career Management Field 67 recommendations will be reviewed for application to other Enlisted Personnel Management System (EPMS) Career Management Fields.

c. SSG efforts are directed toward but not limited to the following issues:

(1) Development of a grade feasible structure for TOE/MTOE/TDA aviation units that considers today's budget and force content constraints.

(2) Validity of Standards of Grade Authorizations (SGA) application for CMF 67.

(3) Potential of orienting Army aircraft maintenance concepts toward the component system approach.

(4) Training program, both formal and OJT, standards to meet Army requirements.

(a) Physical/mental aptitude and educational requirements.

(b) Skill level requirements at each grade.

(c) Criteria to evaluate expected performance of duty.

(5) Effects of current and planned force structure changes on CMF 67 soldiers.

(6) Title 37 entitlements for enlisted aviation incentive pay.

(7) Training and sustainability standards for Individual Ready Reserve (IRR) aviation maintenance personnel.

(a) IRR training program and personnel qualifications.

(b) Required manpower levels to support mobilization.

4. AUTHORITY AND FUNCTIONS.

a. The SSG Steering Committee, along with Chairman, will consist of a general officer or senior field grade officer from ODCSOPS, MILPERCEN, ODCSPER, FORSCOM, RCPAC and USAREUR. The Chairman is authorized to task commands and agencies through respective committee members for specific input.

b. The SSG will be formed using personnel from HQDA, FORSCOM, ~~DARCOM,~~ TRADOC and other commands as required. The Study Group Chairman will be the grade of Colonel or LTC(P), to be announced pending charter approval.

c. In the case of FORSCOM, TRADOC and USAREUR, SSG members may also serve as a representative on the Steering Committee.

d. The Chairman, SSG, will report directly to the Steering Committee.

e. The Steering Committee will operate under the staff supervision of the DCSLOG.

f. Establishment of the SSG does not relieve the Army Staff and/or MACOMs of their assigned authorities and responsibilities.

g. Coordination/interface: The SSG will coordinate and draw from all known on-going studies/staff actions affecting the SSG areas of interest.

h. SSG is organized under the authority of paragraph 1-2 of AR 5-5, the Army Study System, 5 July 1977.

5. ADMINISTRATIVE SUPPORT.

a. Required funds will be provided by parent agencies.

b. Parent agencies of Steering Committee and SSG members will fund travel from home station to Washington, D. C. and return.

c. Arrangements for administrative personnel support (one secretary and one clerk typist) will be made via coordination between ODCSLOG and DACS-DSA with clerical support furnished on an as available basis.

d. Detailed administrative guidance will be addressed in SSG Letter of Instruction, to be published upon approval of study.

6. EXPIRATION. This charter terminates with submission of the SSG final report to the VCSA.

ANNEX C

CMF 67 SSG MEMBERSHIP

COL Ronald C. Vines	MILPERCEN
MAJ Walter C. Breckons	USAREUR
MAJ James E. Moulton	RCPAC
SGM Jamie N. Johnston, Jr.	ODCSOPS
MSG John H. Pratt	TRADOC
SFC Jonas B. Alley	FORSCOM
MR Kenneth E. Fee	MILPERCEN

CHAPTER 3

FORCE STRUCTURE

CONTENTS

CHAPTER 3

FORCE STRUCTURE

1. INTRODUCTION.

This chapter is directed to the current Army force structure in terms of the capabilities of and the requirements and authorizations for aviation maintenance personnel (CMF 67). Assessment of the current force structure entailed a detailed review of the 17,067 CMF 67 positions which are distributed among 17 aviation maintenance MOS and in 415 TOE and TDA organizations. This assessment also required a review of unit missions; MOS authorizations, duty requirements and capabilities; training requirements and methodology; and personnel management policies. Specifically this meant an understanding of what is required of the force structure, what are its capabilities, and can the training and personnel management system support these requirements.

Early study effort indicated that accurate problem identification and resolution were dependent upon a clear understanding and application of the aggregate interrelationships between force structuring, training, and personnel management issues. With this approach, the recommendations in each chapter complement and support recommendations of other chapters in a synergistic manner with the value of each individual action being dependent upon or multiplied by the effect of others.

2. GRADE SUSTAINABILITY.

A. BACKGROUND. Grade sustainability problems in CMF 67 result from the failure to fully recognize training and personnel management implications during force structure development. As a self-renewing structure, the Active Army is almost totally dependent upon E1 accessions as the ultimate source of supervisory personnel. Therefore, it is essential that the designed structure recognize supervisory requirements and compensate for anticipated losses. From a personnel management point of view, the aggregate structure must be feasible or sustainable in its design. A sustainable MOS or CMF has sufficient lower grade positions to allow for attrition, acquisition of proficiency and experience, provide promotion selectivity to the next higher grade, and produce the quality and quantity required at the next higher grade. This requirement is analogous to the procedure of accessing more recruits than the structure requires. In the accession process, compensation is made for losses which will occur during BCT and AIT. In a similar manner, the total MOS and CMF authorization must recognize that all personnel will not complete their first term of service, will not all reenlist at the end of enlistment periods, and are not all qualified for promotion to the next higher grade. This requirement is even

more imperative in a peacetime structure because an MOS or CMF structure which cannot meet grade-by-grade quantitative and qualitative requirements during peacetime, cannot hope to meet the increased demands generated by war.

Sustainability, or grade feasibility, is grossly misunderstood and generally viewed by the field as DSCPER chicanery which fails to pragmatically accept or understand tactical requirements. On the other hand if the essential elements of sustainability are not addressed, the personnel system will be unable to provide the required number of personnel with the requisite skill and experience. This is equally true of MOS and CMFs.

A sustainable structure is one which is generally pyramidal in shape with a reduced number of personnel authorized at each successively higher grade level. An unsustainable structure is generally diamond shaped with a large cell of middle grade authorizations. This type of structure is unsustainable because the small number of entry positions are inadequate to feed the mid-level requirements and do not provide sufficient positions for the acquisition of the skill and experience required of the mid-level positions. Another problem with an unsustainable structure is that promotion bottlenecks generally exist above the large middle cell because of limited promotion opportunity which leads to migration out of the occupational specialty or separation from active duty. Initial training in the Army is directed toward producing an individual qualified at the lower grade level. Training sufficient personnel to meet mid-level requirements could provide adequate numbers; however, they would lack the skill and experience required of the mid-level positions. Obviously annual accessions and structured lower grade positions must be sufficient to compensate for losses and ultimately produce the required number of personnel at mid-level grades and above.

Failure to structure each MOS in a grade sustainable manner when designing a force, generally results in the following:

(1) An inventory shortage at the unsustainable grades.

(2) A lack of the required skill and experience among incumbents at the unsustainable grade resulting from excessively accelerated promotions and insufficient time to gain the necessary experience.

(3) A high migration rate out of the occupational speciality at grades where unsustainability exists because of promotion bottlenecks which further exacerbates inventory shortages.

(4) High migration rates into the occupational speciality from other fields at the grade below the unsustainable grade due to above average promotion opportunity and inventory shortages. This causes further deviations between skill level and grade because the experience level of incoming personnel will be less than their grade level.

B. DISCUSSION. All of these problems are evident in the CMF 67 authorizations and grade distribution shown in Figure 3-1. This structure is unsustainable at E5 because E3 and E4 authorizations are insufficient to produce the required E5's. Obviously to compensate for first term attrition rates of 35 to 40 percent and recognize first term reenlistment rates of 25 percent or less, a pyramidal structure with a greater number of E3's and E4's is required. Another problem with this structure is the relationship between E5 and E6 which fails to provide adequate promotion opportunity to E6. Conversely, in terms of the total CMF authorizations, there are more E6 and E7 authorizations than can be sustained.

Under the Enlisted Personnel Management System (EPMS) it was recognized that differences exist among MOS and CMF in terms of grade requirement. Consequently, in an attempt to meet quantitative and qualitative requirements while providing an equitable (not necessarily equal) promotion opportunity among various MOS, a band of acceptable promotion opportunity was established for each grade. This band or range is the promotion opportunity which should exist in an MOS after anticipated losses are considered. Promotion opportunity goals and CMF 67 promotion opportunity are:

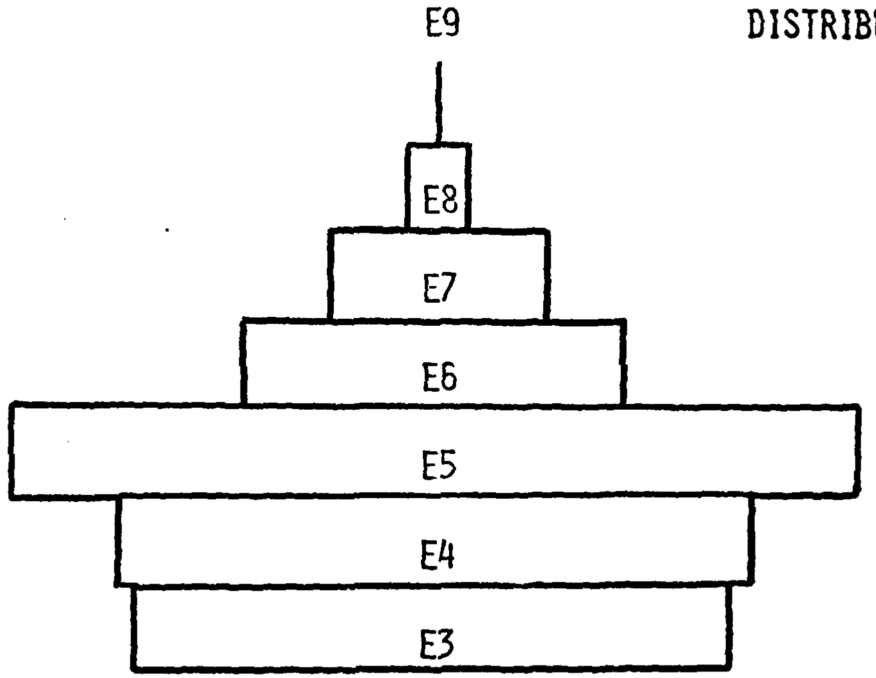
PROMOTION OPPORTUNITY

To Grade	EPMS Goal	CMF 67 Current	CMF 67 Proposed
E9	26-76%	36.4%	44.7%
E8	27-77%	41.5%	52.3%
E7	56-99%	76.4%	75.4%
E6	72-92%	64.2%	74.7%
E5	81-99%	100%	95.3%
E4	83-99%	100%	96.8%

This indicates that current requirements at E4 and E5 are such that all E3 and E4 personnel must be promoted to attempt to meet requirements, consequently there is no promotion selectivity. However, the promotion opportunity to E6 is approximately 8% below the minimum EPMS goal and the opportunity to E8 and E9 is in the lower range of the band.

The problems with grade sustainability in CMF 67 are actually much worse than indicated by the aggregate portrayal in Figure 3-1. This is because the problems which exist to varying degrees in each MOS tend to be obscured when they are averaged for an aggregate CMF portrayal. For example, you note from Figure 3-2 that conditions in MOS 67N (Utility Helicopter Repairer) are much worse than reflected by the CMF aggregate. Obviously this structure has inadequate E3's and E4's. In fact there are insufficient

CMF 67 MAY 79 TAADS

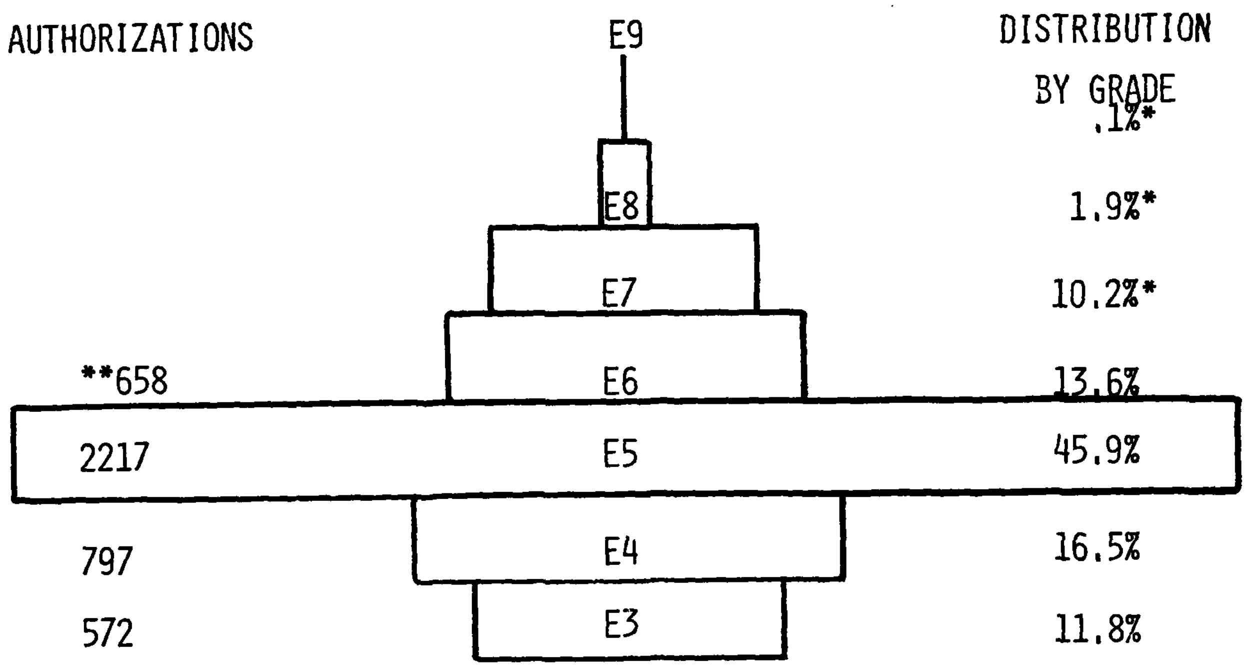


AUTHORIZATIONS	DISTRIBUTION BY GRADE
18	.1%
322	1.9%
1451	8.5%
2364	13.9%
5289	31.0%
3978	23.3%
3645	21.3%
TOTAL 17067	

EXCLUDES TTHS

FIGURE 3-1

CURRENT MOS 67N DISTRIBUTION



TOTAL 4244

EXCLUDES TTHS

* PROPORTIONAL SHARE OF 67 SERIES AUTHORIZATIONS

**PROPORTIONAL SHARE OF 67W AUTHORIZATIONS

FIGURE 3-2

E3 and E4 positions to sustain even E6 requirements. It is also apparent from comparing E5 and E6 authorizations that 67N has very poor promotion opportunity to E6. MOS structures such as this, necessitate expeditious promotion to E5 which means limited opportunity to acquire the skill and experience required at Skill Level 2. During FY 1978 the median 67N was promoted to E5 with 2 1/2 years service which was approximtely one year sooner than his nonaviation contemporary. However, he averaged 10 years time-in-service (TIS) upon making E6 which was approximately 2 years longer than his nonaviation contemporary. Conditions such as these are a source of considerable individual frustration and contribute significantly to personnel losses in CMF 67.

CMF 67 authorization by MOS and grade as well as promotion opportunity are shown in Tables 3-1 and 3-2. These indicate that MOS unsustainability currently exists as follows:

To Grade	MOS
E4	67G, 67N, 67T, 67U, 67V, 67Y, 68J, 68M
E5	67G, 67N, 67T, 67U, 67V, 67Y
E6	67T, 67U, 68J

It should also be noted that inadequate promotion opportunity currently exists as follows:

To Grade	MOS
E4	68D, 68F, 68H
E5	68D, 68H, 68M
E6	67G, 67N, 67V, 67Y, 68B, 68D, 68G, 68F, 68H

Promotion opportunity data does not completely portray the grade distributional deficiencies of the aviation maintenance MOS. This results from promotion opportunity to the next higher grade being determined by comparing authorization at two adjacent grades without considering if the authorizations in the aggregate are either adequate or inadequate. Consequently, Table 3-2 indicates that promotion opportunity to E7 for the 68 Series MOS are currently adequate. In reality, there are insufficient authorizations at E6 which must be addressed prior to assessing promotion opportunity to E7.

A better instrument for an early assessment of grade-by-grade sustainability in an MOS is one which compares the percentage distribution of an MOS at each grade with the grade percentage distributions which can be sustained. In a sustainable MOS, the grade-by-grade percentile

CMF 67
SUMMARY

MOS	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI* E6	CURRENT S E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
66G												22	37				59
66H												13	24				37
66N												165	263				428
66T												16	20				36
66U													131				131
66V												86	145				231
66X**																	
66Y												65	110				175
66 Series Total												367	730				1097
67G	59	135	375	90	75				734	145	139	85	21	52			442
67H	Included in 67G									83	82	44	13				222
67N	572	797	2217	430	228				4244	1403	1287	902	313				3905
67T	6	13	72	28	46				165	48	37	30	11				126
67U	541	317	253	85	412				1608	540	523	373	136				1572
67V	294	700	768	227	70				2059	688	646	428	128				1890
67X**					6				6				4				4
67Y	500	477	688	177	57				1899	635	641	389	154				1819
67Z						1245	322	18	1585					801	332	34	1167
67 Series Total	1972	2439	4373	1037	894	1245	322	18	12300	3542	3355	2251	780	853	332	34	11147
68B	277	246	162		61				746	263	246	176					685
68D	214	145	65		21				445	156	159	109					424
68F	150	117	89		18				374	140	130	86	38				394
68G	414	366	322		85				1187	406	396	300					1102
68H	137	65	41		5				248	72	120	51	25				268
68J	274	312	123	1	163				873	264	272	190	176	97			999
68M	207	288	114	1	78				688	219	213	160					592
68K						206			206				297	207			504
68 Series Total	1673	1539	916	2	431	206			4767	1520	1536	1072	536	304			4968
CMF TOTAL	3645	3978	5289	1039	1325	1451	322	18	17067	5062	4891	3690	2046	1157	332	34	17212

*MOS 67W redistributed into other MOS

** MOS proposed for Reserve Force only

TABLE 3-1

CMF 67 PROMOTION OPPORTUNITY

MOS	To E4 Current	To E4 Proposed	To E5 Current	To E5 Proposed	To E6 Current	To E6 Proposed
67G	1.000*	.964	1.000*	.957	.641*	.727
67H	N/A	.969	N/A	.937	N/A	.827
67N	1.000*	.966	1.000*	.999	.471*	.733
67U	1.000*	.960	1.000*	.966	1.000*	.889
67V	1.000*	.976	1.000*	.975	.582*	.724
67Y	1.000*	.976	1.000*	.928	.526*	.773
68B	.837	.938	.825	.915	.523*	.700*
68D	.708*	.972	.627*	.889	.462*	.701*
68G	.930	.970	.943	.944	.393*	.702*
68F	.827*	.903	.847	.853	.317*	.637*
68H	.586*	1.000*	.739*	.656*	.229*	.676*
68J	.977	.931	.879*	.896	1.000*	.689*
68M	1.000*	.946	.659*	.937	.825	.696*
CMF AVE	1.000*	.968	1.000*	.953	.642*	.747
EPMS GOAL	.83-.99		.81-99		.72-.92	

MOS	To E7 Current	To E7 Proposed	To E8 Current	To E8 Proposed	To E9 Current	To E9 Proposed
67G	.782	.729	.395	.505	.283	.477
67H	N/A	.740	N/A	.554	N/A	.633
67N	.784	.755	.417	.523	.386	.440
67U	.781	.755	.400	.514	.253*	.387
67V	.785	.771	.417	.513	.402	.428
67Y	.785	.755	.417	.518	.382	.436
68B	.642	.767	.418	.554	.663	.526
68D	.637	.753	.455	.505	.896*	.477
68G	.657	.758	.468	.526	.824*	.492
68F	.665	.761	.495	.517	.896*	.663
68H	.918	.759	1.000*	.503	1.000*	.526
68J	.648	.748	.411	.546	.372	.526
68M	.650	.743	.399	.538	.526	.463
CMF AVE	.764	.754	.415	.523	.364	.447
EPMS GOAL	.56-.99		.22-.77		.26-.76	

*Exceeds EPMS Goal

NOTE: Promotion opportunity for E5 and E6 personnel in 66 Series MOS are included as a part of the corresponding 67 Series MOS analysis.

TABLE 3-2

distribution, will normally decrease with each higher grade. Table 3-3 reflects distribution which can be supported in CMF 67. It does not consider the impact of the specific MOS continuation rates which is required for precise assessments; however, it does consider the impact of the length of AIT. When Table 3-3 is compared with the percentile distribution of current authorizations in Table 3-4, you note that generally insufficient authorizations exist in the 67 Series MOS at grades E3 and E4 and excess authorizations exist at grades E5, E6, and E7. Conversely, in the 68 Series MOS there generally exist excess authorizations at E3 and E4 while there are insufficient authorizations at E5, E6, and E7. These comparisons do not consider peculiar requirements of a particular MOS but they should invite questions as to the basis for the wide disparity between subfields of CMF 67.

Two major aspects of grade sustainability should be evident at this time. One relates to the notion that while grade sustainability in an MOS is desirable, the really crucial issue is CMF sustainability. With the exception of a CMF containing a single MOS, this is false, and should have no application in the assessment of the supportability and viability of a CMF and its related MOS. There are budgetary considerations relating to distribution of the career force and of certain grade level groupings; however, these should be attained for a CMF by appropriate distribution to each MOS. A sustainable CMF is only sustainable if each MOS is sustainable, consequently CMF sustainability is not germane. From the individual soldier's point of view, CMF sustainability is even less germane. His perceptions of opportunity for advancement and job satisfaction are predicated upon conditions in his own MOS not a nonexistent hybrid consisting of average CMF factors. We should ensure that he is properly trained in his MOS and that there is ample opportunity for him to advance therein. This requires addressal of each MOS as a separate entity.

DISTRIBUTION MODEL
DESIRED PERCENTAGE OF MOS BY GRADE

MO MOS	AIT Length	E1-E3	E4	E5	E6	E7	E8	E9
67G	20 wks	27	30	21	12	07	02	01
67N	11	30	29	19	12	07	02	01
67T	10	30	29	19	12	07	02	01
67U	13	29	29	20	12	07	02	01
67V	8	31	29	18	12	07	02	01
67Y	12	30	29	19	12	07	02	01
68B	12	30	29	19	12	07	02	01
68D	14	29	29	20	12	07	02	01
68F	15	29	29	20	12	07	02	01
68G	14	29	29	20	12	07	02	01
68H	10	30	29	19	12	07	02	01
68J	19	27	30	21	12	07	02	01
68M	15	29	29	20	12	07	02	01

TABLE 3-3

The second major aspect of grade sustainability pertains to its own significance. Just how essential is grade sustainability? Information gained during the course of this study, indicates that it is of major importance. The relationship between E3 and E4 authorizations is probably of marginal significance in terms of sustainability as long as there are sufficient SL1 (E3 and E4) authorizations to sustain SL2 (E5) requirements. However, it is essential that authorizations for all other grades be such that they are sustainable by the next lower grade level. Failure to recognize this, mandates that the grade and skill requirements of the force structure will not be met. Figure 3-3 portrays the percentile distribution of E3-E6 authorizations for various CMF 67 MOS and reflects the varied problems which exist at the MOS level. Using current 67N authorizations as an example (Figure 3-2), it is apparent that if annual accessions were based upon sustaining E3 requirements, there would be significant shortfalls at grades E4, E5, and E6. Consequently, annual accessions are predicated upon sustaining aggregate E3-E6 quantitative requirements which insures that the inventory is adequate to cover overall authorizations while disregarding grade and skill requirements.

The approximate number of personnel (aged in terms of time since AIT graduation) necessary to sustain overall 67N requirements is shown in Figure 3-4. When supply (trained personnel) and demand (authorizations) are compared as shown in Figure 3-5, the experience of personnel filling force structure positions becomes apparent. In terms of time since AIT graduation, personnel filling E3-E5 authorizations have the following experience:

TIME SINCE AIT GRADUATION	UTILIZATION
0 - 1 year	53% Fill E3 Positions
	47% Fill E4 Positions
1 - 2 years	27% Fill E4 Positions
	73% Fill E4 Positions
2 - 3 years	100% Fill E5 Positions

From this data it is apparent that a significant portion of E5 positions must be filled by personnel without the requisite grade or skill. The training implications of this condition, which are also incompatible with duties which must be performed, are discussed in Chapter 5.

From the data contained in this chapter and supported by other chapters, it can be determined that the MOS which constitute CMF 67 have problems relating to inventory shortages, promotion stagnation, in and out migration, and a lack of experience at certain grade levels. The magnitude of the problem is directly related to the degree of unsustainability and a lack of promotion opportunity in a specific MOS. For instance, Table 3-5 reflects

CMF 67
PERCENTAGE DISTRIBUTION BY MOS AND GRADE
(EXCLUDES TTHS)

	CURRENT							PROPOSED						
MOS	E3	E4	E5	E6	E7	E8	E9	E3	E4	E5	E6	E7	E8	E9
66G	0	0	0	0	0	0	0			*	*			
66H	0	0	0	0	0	0	0			*	*			
66N	0	0	0	0	0	0	0			*	*			
66T	0	0	0	0	0	0	0			*	*			
66U	0	0	0	0	0	0	0			*	*			
66V	0	0	0	0	0	0	0			*	*			
66X	0	0	0	0	0	0	0			*	*			
66Y	0	0	0	0	0	0	0			*	*			
66Z	0	0	0	0	10.2	1.9	.1					7.0	2.0	.2
67G	7.1	16.1	44.9	19.7	0	0	0	29.4	28.2	21.7	11.8	6.7	0	0
67H	0	0	0	0	0	0	0	29.2	28.8	20.1	13.0	0	0	0
67N	11.8	16.5	45.9	13.6	0	0	0	29.4	27.0	22.3	12.1	0	0	0
67T	3.2	6.9	38.3	39.4	0	0	0	26.9	20.7	25.8	17.4	0	0	0
67U	29.6	17.3	13.8	27.1	0	0	0	28.8	27.9	19.9	14.2	0	0	0
67V	12.5	29.8	32.8	12.7	0	0	0	29.4	27.7	22.0	11.7	0	0	0
67X	0	0	0	100.0	0	0	0	0	0	0	100.0	0	0	0
67Y	23.1	22.1	31.8	10.8	0	0	0	28.9	29.2	20.7	12.0	0	0	0
68B	34.8	30.9	20.4	7.1	0	0	0	31.1	29.0	20.8	0	0	0	0
68D	45.1	30.6	13.7	4.4	0	0	0	29.8	30.3	20.8	0	0	0	0
68G	32.7	28.9	25.5	6.7	0	0	0	29.8	29.1	22.0	0	0	0	0
68F	37.6	29.4	22.3	4.5	0	0	0	32.6	30.3	20.0	8.9	0	0	0
68H	51.8	24.6	15.5	1.9	0	0	0	24.6	41.1	17.5	8.6	0	0	0
68J	29.5	33.5	13.2	17.6	0	0	0	29.5	30.3	21.2	10.8	6.0	0	0
68M	28.2	39.3	15.5	10.8	0	0	0	30.0	29.1	21.9	0	0	0	0
68K	0	0	0	0	4.2	0	0	0	0	0	10.9	6.0	0	0
CMF TOTAL	2.13	23.3	31.0	13.9	8.5	1.9	.1	29.4	28.4	21.4	11.9	6.7	2.0	.2

*Included in 67 Series Distribution

TABLE 3-4

PERCENTAGE DISTRIBUTION E3-E6 AUTHORIZATIONS (TOE-TDA)

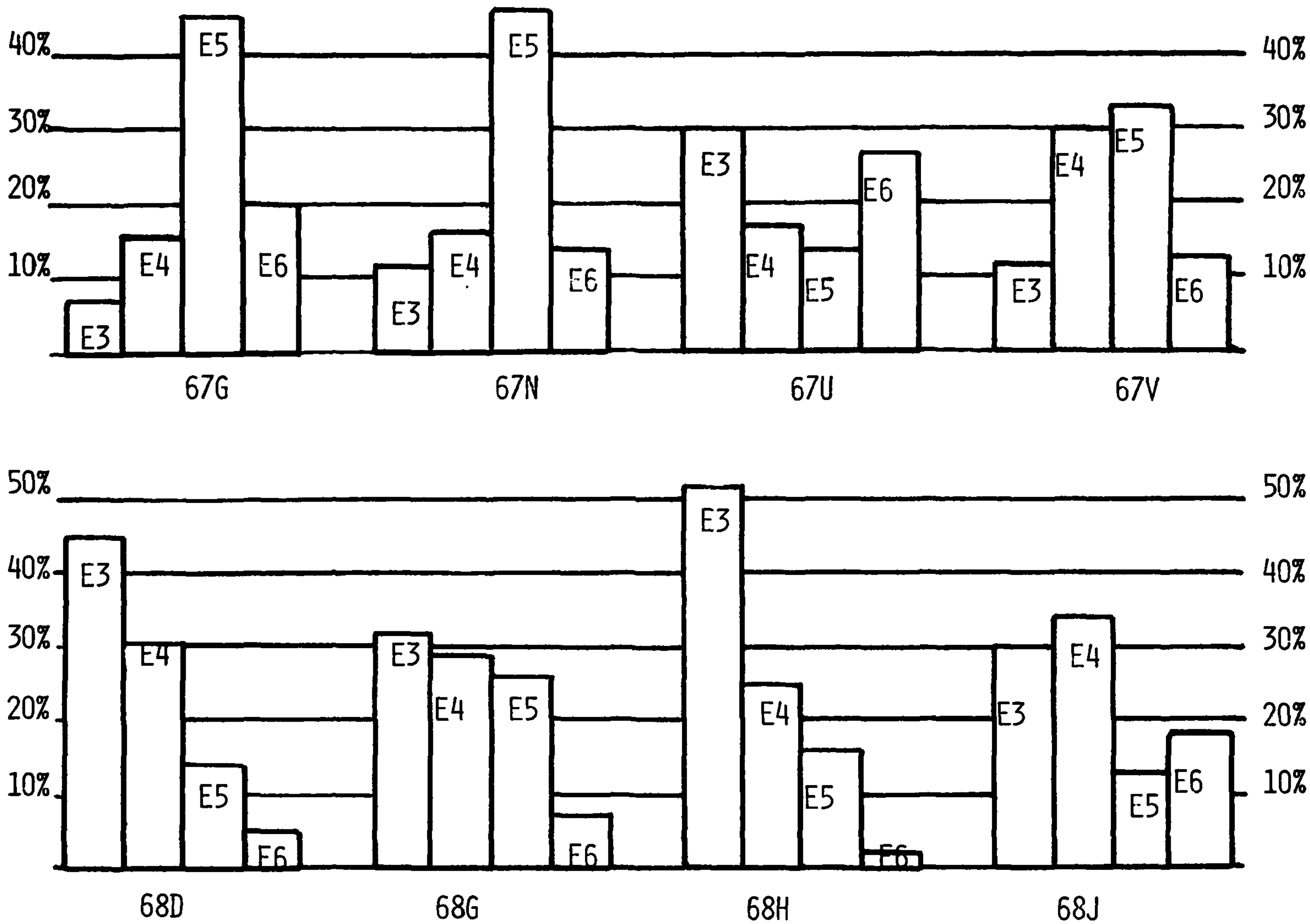


FIGURE 3-3

67N SUSTAINMENT

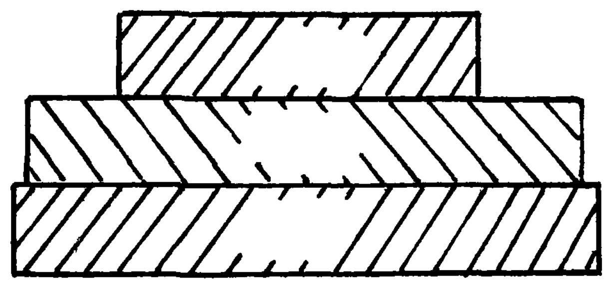


FIGURE 3-4

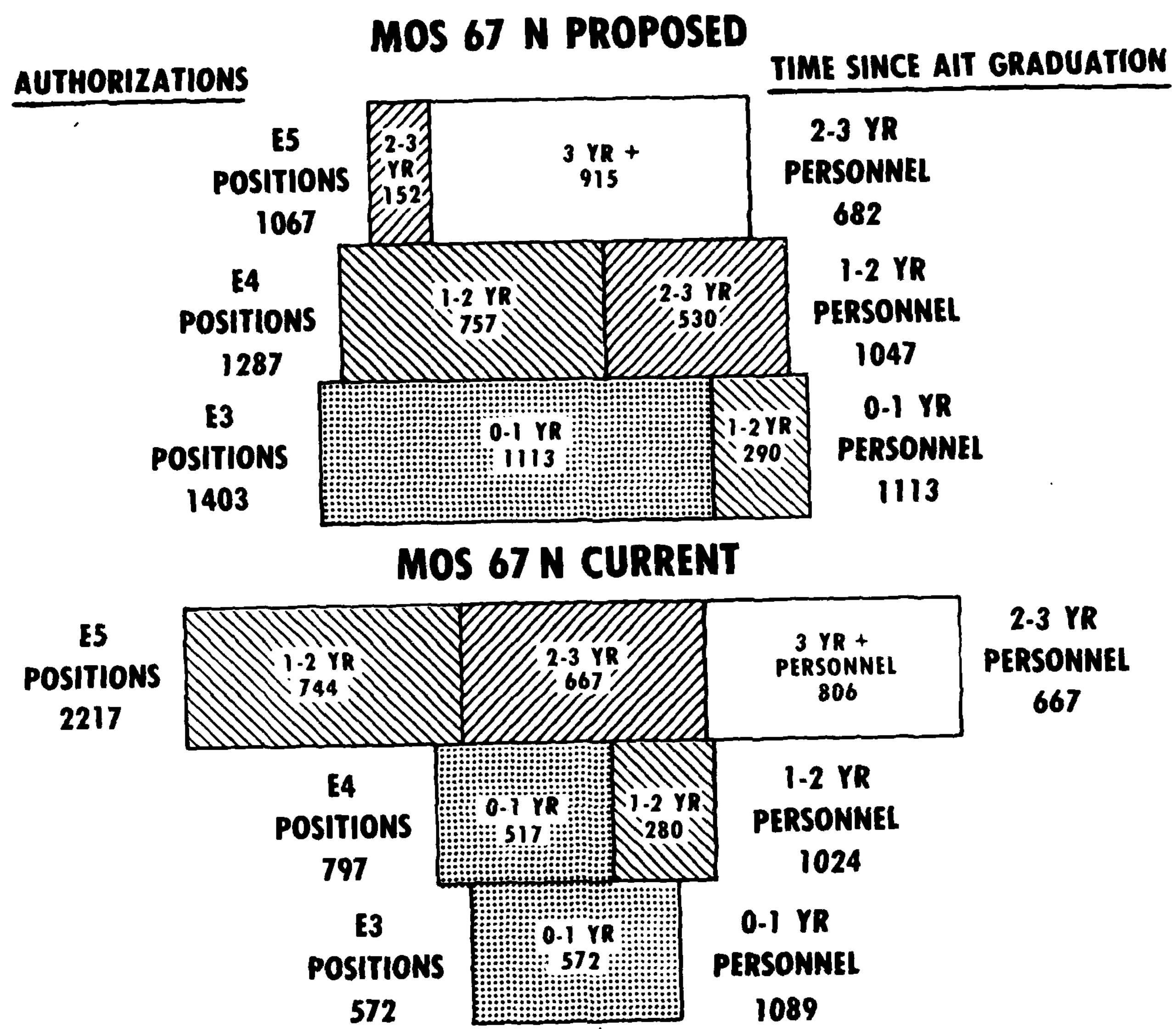

MOS 67 N PROPOSED
AUTHORIZATIONS
TIME SINCE AIT GRADUATION
E5
POSITIONS
1067
2-3
YR
152
3 YR +
915
2-3 YR
PERSONNEL
682
E4
POSITIONS
1287
1-2 YR
757
2-3 YR
530
1-2 YR
PERSONNEL
1047
E3
POSITIONS
1403
0-1 YR
1113
1-2 YR
290
0-1 YR
PERSONNEL
1113
MOS 67 N CURRENT
E5
POSITIONS
2217
1-2 YR
744
2-3 YR
667
3 YR +
PERSONNEL
806
2-3 YR
PERSONNEL
667
E4
POSITIONS
797
0-1 YR
517
1-2 YR
280
1-2 YR
PERSONNEL
1024
E3
POSITIONS
572
0-1 YR
572
0-1 YR
PERSONNEL
1089

FIGURE 3-5

an inventory excess at E6 in both the 67 and 68 series subfield which tends to compensate for an inadequate promotion opportunity to E6. At grade E5, a significant inventory shortage exists in the 67 Series MOS (even though personnel are being promoted as rapidly as they meet the minimum criteria)

CURRENT STRUCTURE VS CURRENT OPERATING STRENGTH

67 SERIES MOS

	E3	E4	E5	E6	E7	E8	E9	TOTAL
Operating Strength*	3303	2955	3512	2043	1287	308	32	13440
Current TAADS	1972	2439	4373	1931	1245	322	18	12300
Difference	+1331	+516	-861	+112	+42	-14	+14	+1140

68 SERIES MOS

	E3	E4	E5	E6	E7	TOTAL
Operating Strength*	1626	1304	1154	478	151	4713
Current TAADS	1673	1539	916	433	206	4767
Difference	-47	-235	+238	+45	-55	-54

CMF 67

	E3	E4	E5	E6	E7	E8	E9	TOTAL
Operating Strength*	4929	4259	4666	2521	1438	308	32	18153
Current TAADS	3645	3978	5289	2364	1451	322	18	17067
Difference	+1284	+281	-623	+157	-13	-14	+14	+1086

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TABLE 3-5

while an excess exists in the 68 Series MOS subfield. Both conditions are as expected. The excesses at E3 and E4 in the 67 Series MOS and shortages in the 68 Series MOS are as anticipated from MOS structures which are unsustainable in design.

Many of the sustainability problems which have been identified with the MOS in CMF 67 are not peculiar to the aviation maintenance CMF. A review of 315 other MOS and 29 CMF (CMF 97 - Band excluded) revealed that 69.5 percent (219 MOS) were unsustainable in at least one grade. Of the 219 MOS, 63 (28.8 percent) were unsustainable at two or more grades. An MOS was considered to be unsustainable when authorizations at a higher grade exceeded authorizations at the next lower grade; therefore, demanding a continuation rate in excess of 100 percent to satisfy requirements. Unsustainability existed in the 315 MOS at the following grades:

E4	E5	E6	E7
124	91	58	21

Based upon the findings of this study, it can be assumed that many of the overall Army manpower problems are a result of unsupportable MOS grade structures.

C. FINDINGS.

(1) Grade sustainability and promotion adequacy are essential characteristics of MOS structural design and their implementation in the force structure is essential.

(2) Overall CMF sustainability is an unsatisfactory management tool for assessing the adequacy of MOS grade distributions and promotion opportunity.

(3) The MOS in CMF 67 currently contain a significant lack of grade sustainability and adequacy of promotion opportunity.

(4) The grade and skill requirements of the force structure cannot be met.

(5) The overall Army MOS structure (less CMF 67) also contains a significant degree of unsustainability in grade authorizations.

D. RECOMMENDATIONS.

(1) Revise the aviation maintenance MOS authorizations to attain grade sustainability and adequacy of promotion opportunity for each MOS.

(2) Action be initiated to address the grade sustainability and promotion opportunity problems in MOS other than CMF 67.

(3) Subsequent changes to MOS structures and authorizations be assessed in terms of grade sustainability and promotion opportunity prior to implementation.

3. FORCE STRUCTURE DOCUMENTATION.

A. BACKGROUND. The determination of force structure requirements is an element in the personnel life cycle sequence of events (requirements, accessions, training, distribution, sustainment, and separation) directed toward maintaining manpower goals. Requirement determination is initiated by the development of the required force structure which is expressed in terms of the required number of type units. TRADOC, as the proponent of TOE (Table of Organization and Equipment) development, translates doctrine into an organizational structure by means of a TOE. MACOM (Major Army Command) then modify TOE into MTOE which reflect command unique missions and constraints. The MTOE are then entered into the TAADS (The Army Authorization Documentation System) which provides a central file of manpower authorizations by grade and MOS. After application of resource constraints, they are entered into the PERSACS (Personnel Structure and Composition System) which reflect definitive personnel requirements by grade

and MOS. The PERSACS along with historical loss data and inventory data provide the basis for determining accession and training requirements. The requirement determination process is complex and involves a large number of diverse organizations. Because of these complexities and the decentralized implementation process, the results are sometimes less than optional. This appears to be primarily caused by the proponents inability to fully understand the synergistic effect of other factors bearing on the process. Specifically, the force structuring process cannot function efficiently without a concurrent addressal of associated training and personnel management implications. Collectively these are the source of the most significant problems, the resolution of which must consider their aggregate interrelationship rather than each implication singularly. Force structuring requires consideration of unit mission, supervisory and subordinate requirements, career development considerations, training methodology, unit training responsibility, as well as other personnel management considerations regarding continuation, promotion, and reenlistment rates.

B. DISCUSSION. An assessment of CMF 67 revealed that the aggregate enlisted aviation maintenance force structure had not been developed in the most effective manner. In fact, the resultant structure reflects micro-management at its worst. Each segment reflects proponent expertise and vested interests which frequently ignore associated implications which bear heavily on efficient management. The problem begins with identification of manpower issues associated with the acquisition of new equipment and the development of new type organizations. This requires an early determination of manpower supportability of the new item from both a quantitative and qualitative point of view. This determines the capability of the manpower pool to support demands of the new system concurrently with demands of other systems being introduced or sustained. In terms of training, this means a through job and task analysis to ascertain what tasks must be performed, frequency of occurrence, task difficulty, required skill level, and distribution of tasks among duty positions. Next a determination of training methodology is required. This means an assessment of when tasks should be taught - initially or at a subsequent stage of skill progression; where the training should be administered - institutionally or within the work unit as part of a supervised "on the job" training program; and how the training will be conducted and supported. If follow-on training is to be conducted in the work unit or organization, it mandates sufficient, well qualified first line supervisors in the unit to serve as the cornerstone of the unit "on the job" training program and availability of necessary exportable training materials. It also requires a pragmatic assessment of potential operator and maintainer prerequisites and assurance that aggregate MOS structures are grade feasible or sustainable.

(1) NUMBER OF AUTHORIZATION DOCUMENTS. Significant problems exist in CMF 67 regarding TOE and MTOE development. From a quantitative point of view, the TAADS decremented as shown in Section 4 reflects 17,067 enlisted

aviation maintenance authorizations divided among 305 TOE and 110 TDA organizations. In terms of TOE elements, 14,870 authorizations are documented under 31 different TOE's which have been further modified into 134 different structures as a result of MTOE actions. The large number applicable TOE, MTOE, and TDA in conjunction with the number of porponents responsible for their development, significantly increases the probability of the authorization documents being unsupportable. This also contributes to the disparities among documents for similar organizations; disparities which do not appear to be based upon unique unit requirements. Unit A will have one authorization in a particular MOS and it will be in grade E5; Unit B, a like unit, will have three authorizations one each in grades E3, E4, and E5; while Unit C will again have one authorization but in grade E3. This does not necessarily result in unsupportable requirements if effective dates of new documents provide sufficient lead time to allow the training and personnel management communities to adjust to new requirements and if changes produced grade sustainable MOS structures. However, the management system has not yet developed sufficient controls to ensure that approved changes to the force structure are in fact supportable.

(2) ORGANIZATIONAL STRUCTURE VARIANCE. Authorization documents reflect such wide variances in aviation organizations as to indicate that the force developer did not adequately consider unit training and supervisory responsibilities. The MTOE includes platoons which range from 152 enlisted personnel to five enlisted personnel, each with an E7 platoon sergeant. Flight platoons range from those with 46 aircraft, and 47 repairers/crew chief (no E6 supervisors and one E7) to those with eight aircraft and nine enlisted personnel all but one being grades E6 and E7. In the case of the UH-60 flight platoon; it is authorized seven aircraft and nine enlisted personnel, three of which are grades E6 and E7. Supervisory authorizations in flight platoons range from one E6/E7 per 47 E3-E5 authorizations to all enlisted personnel in the platoon being grades E6/E7. Maintenance elements reflect equal disparities, with platoon enlisted authorizations ranging from 35 to 152 personnel and supervisory relationships ranging from one E6/E7 per 2.5 subordinates to one E6/E7 per 19.0 subordinates (see Annex A and Section 4 for additional data). There is also a problem in the distribution of supervisory authorizations. The total number of supervisory grades (E6-E7) authorized in CMF 67 are excessive in terms of the aggregate structures ability to sustain requirements; however, the actual distribution among certain organizational elements and MOS has failed to fully recognize supervisory responsibility and training requirements. The training and technical supervision functions are further complicated by the tendency in aviation organizations to fragment authorizations in an MOS among a large number of subordinate elements. Consequently, the density of authorizations in any element is normally insufficient to justify E6 supervisors and therefore no first-line technical supervision is available. This occurs with crew chiefs where in some companies they are distributed among headquarters, flight, maintenance and supply elements. This also occurs in

maintenance elements where authorizations in three or more aircraft repairer MOS will be equally distributed among three sections with technical supervision available in one MOS rather than each section containing only one MOS. There is a significant need, in terms of future force development, to group like aviation maintenance MOS into as few unit elements as possible. The goal should be to authorize no aviation maintenance personnel in elements without technical supervision.

(3) SGA APPLICATION. The TOE, MTOE, and TDA reflect equal variances regarding standards of grade authorization (SGA) application. This appears to be a function of four factors:

- o Intentional disregard of SGA due to perceived skill requirements.
- o Failure to understand the necessity for proper application.
- o Latitude in the MTOE development process.
- o Lack of clear instructions regarding the SGA application process.

AR 310-49 (The Army Authorization Documents System) allows the MACOM significant latitude in the modification of TOE as long as changes remain within total enlisted authorization constraints. This allows changes to be made among MOS and grades without a qualitative or quantitative assessment of their supportability. From an organizational point of view, changing three E5 authorizations from one MOS to another has insignificant personnel management implications. However, from a macro-management point of view, if this action occurs with sufficient frequency it may cause major grade sustainability and career development problems in an MOS and result in the personnel system being unable to support requirements. In terms of SGA application procedures, AR 611-201 is unclear as to how they should be applied by the force developer. Specifics are not provided as to what organizational element they should be applied against i.e.; to the smallest element such as squad, team, section or against larger elements such as platoon or company. For instance, using a maintenance element with 10 MOS 67N (Utility Helicopter Repairer) authorizations as an example, the following grade distributions would occur dependent upon whether the SGA was applied against two sections of five personnel each or one element of 10 personnel:

MOS 67N

Grade	2 Sections	1 Section
E3	4	3
E4	4	3
E5	2	4
E6	0	1

It has also been a common practice to authorize an E6 supervisor for any element classified as a section, regardless of its size. This occurs in the UH-60 flight platoons where an E6 section chief/crew chief is authorized for supervision of two other E5 crew chiefs. In the aggregate structure these differences have a major impact. However, in fairness to the force developer, it should be noted that no information is available to him for use as a guide in determining if a proposed structure is supportable in terms of either supervisory or subordinate grade levels. He takes his chances and if the document is checked and found to be unsupportable it is returned for revision. This problem could be greatly reduced if SGA's were developed for and applied against total unit authorizations for a particular MOS. The force developer could then, based upon MOS requirements for a specific number of personnel in the unit, translate the gross authorizations into specific E3, E4, E5 and E6 authorizations. These could then provide some boundaries to the overall organizational structure. If these boundaries were incompatible with unit mission, method of employment or other factors, the grade structure could be modified on an exception basis. Furthermore, this would provide some assurance that incremental changes were supportable; something which is impossible under current procedures. Another problem in the MTOE process occurs when authorizations are shifted from one MOS to another. Action is necessary to cause the grade distribution to be based upon the resulting authorizations in each MOS and discontinue the current practice of transfering the grades associated with the positions being transferred. This is the only way of assuring that the resultant structure is supportable.

(4) ASI/SQI APPLICATION. Force structure supportability is further degraded by numerous errors and inconsistencies involving additional skill identifiers (ASI) and special qualification identifiers (SQI). The SQI of "F" is intended to identify positions which require personnel to perform frequent and repetitive aerial flight. However, CMF 67 positions documented as "F" in the TAADS constitute only approximately 69% of the CMF 67 personnel receiving flight pay. In addition to enlisted flight status positions not being documented, the SQI of "F" is an ineffective management tool. This is because it fails to provide a means of discriminating between crewmember and noncrewmember positions; consequently, no means is provided of determining specific personnel or fiscal requirements. Establishing a means of distinguising between enlisted aviation crewmembers and noncrew members during the documentation process, requiring force developers to document all aviation flight status positions and using approved documentation as the basis of a position being authorized flight status; could significantly reduce current problems associated with enlisted flight pay entitlements.

ASI application to CMF 67 MOS positions are totally inconsistent. In terms of the TAADS (TOE), only 187 of the 14,870 authorized positions are annotated with an ASI. These are:

ASI	DESCRIPTION	POSITIONS	UNITS
A2	Aviation Safety	37	11
B7	Ejection Seat Repair	68	4
E1	Propeller Assembly Maint	12	5
Z5	Modular Engine Test Stand	70	9
Q1	Aviation Welder	0	0

Using organization and mission similarity as a criteria, an assessment revealed requirements for at least 160 additional A2 positions. An additional four organizations have B7 requirements, an additional 22 organizations have E1 requirements, and three other organizations have Z5 requirements. In terms of Q1, if the ASI is not required in the structure, it should be deleted from the ASI list. Personnel with additional skills cannot be provided unless the requirement is first documented in the TOE/MTOE/TDA. Consequently, force developers must apply them during the development process.

(5) MOS CLASSIFICATION/JOB TITLE. Authorization documents also contain significant errors in terms of MOS classification and job title. Of the 596 positions classified as Quality Control Supervisors by MOS (67W), 38% are actually identified as Technical Inspectors by duty title and should have been classified in other MOS. There are also numerous positions with duty titles or responsibility for supervision of Aircraft Component Repair Sections, Armament Repair Sections, or Technical Inspector which are erroneously classified as 67Z (Maintenance Supervisor). The TAADS contains an additional 132 CMF 67 positions which should not be in CMF 67 and approximately 10 positions with incorrect aviation maintenance MOS; i.e., duty title of Aircraft Electrician (MOS 68F) classified with a Utility Helicopter Repairer MOS (67N). The preponderance of the inappropriate positions are driver positions in Battalion and Company Headquarters and Airfield Service positions. The Airfield Service positions should be changed to MOS 76W (Petroleum Supply Specialist) with technical supervisory responsibility also changed from an Aircraft Repair MOS to 76W20/30. The current policy of classifying driver positions, where few are authorized, in the MOS associated with the technical function of the organization, is in accordance with AR 611-201 (Paragraph 1-9b(3)(c)(2). However, it is contradictory to the efficient utilization of resources and MOS development. With up to 71% of the critical skill level 1-3 tasks in the 67 series MOS designated as Unit SOJT responsibilities, an individual trained as a helicopter repairer and assigned to a driver position at Battalion or Company Headquarters will soon lose his school acquired technical skills as well as have no opportunity to acquire the additional skills of his aviation maintenance MOS. These positions should be classified as MOS 64C (Driver) positions. Another problem relates to authorizations for specific aviation maintenance MOS in units where there is neither a requirement for the skills involved nor opportunity for personnel filling the positions to apply their

skills. This situation occurs with MOS 68M (Helicopter Weapon System Repairer) in UH-1 and UH-60 organizations. The basis of this is apparently for maintenance of the door guns or the mine dispensing system; however, 68M training is applicable to neither of these requirements. MOS 68M and 68J should only be authorized in units equipped with attack helicopters, in AVIM (Aviation Intermediate Maintenance) organizations, and for special supervisory requirements.

(6) FUTURE MAINTENANCE STRUCTURES. The introduction of new weapon systems with enhanced RAM (Reliability, Availability and Maintainability) characteristics results in reduced MMH/FH (Maintenance Man Hours per Flight Hour) and therefore, less authorizations for aviation maintenance personnel. These reductions in maintenance personnel along with general reductions in unit authorizations for new weapon systems will have significant impact upon efficient maintenance operations and training in the current aviation organizational structure. This problem can be illustrated by comparing a CSAC (Combat Support Aviation Company) equipped with 23 UH-1 helicopters and one equipped with 15 UH-60 helicopters.

CSAC

Type Aircraft	Number Acft Authorized	Reparer & Crew Chief Authorized	Crew Chief Required	Repairers Authorized (Maint PLT)	Repairers Per Aircraft
UH-1	23	43(67N)	23	20	1.87
UH-60	15	19(67T)	15	4	1.27

These authorizations reflect that both aircraft require dedicated flying crew chief who are, under MACRIT criteria, 50% productive for maintenance duties other than those of the crew chief. Distribution of the aircraft repairers is noted below:

UH-1 CSAC (MOS 67N)

Flight Platoon	Flight Platoon	Maintenance Platoon
11 Repairers/Crew Chief	11 Repairers/Crew Chief	20 Repairers 1 Repairer/Crew Chief

UH-60 CSAC (MOS 67T)

Flight Platoon	Flight Platoon	Opns Platoon	Maintenance Platoon
7 Repairers/Crew Chief	7 Repairers/Crew Chief	1 Repairer/Crew Chief	4 Repairers

The UH-1 organization, with 21 Utility Helicopter Repairers authorized in the Maintenance Platoon, provides a manageable structure for accomplishing aircraft maintenance. However, the UH-60 organization, with its enhanced RAM characteristics and inherent requirement for flying crew chief has resulted in an ineffective structure. Repairer authorizations

indicate that the aggregate UH-60 maintenance capability, represented by 4 repairers and 15 crew chief, is compatible with maintenance requirements. However, internal organization presents significant potential problems. The authorization of only four repairers in the AVUM (Aviation Unit Maintenance) Platoon, which has the majority of special tools and maintenance responsibility, provides very limited flexibility or resources for mission accomplishment. Therefore, the AVUM platoon will require augmentation by crew chief on a repetitive basis to accomplish assigned tasks. Recognizing that crew chief will possess a wide range of skill and experience, it appears desirable to place all repairers and crew chief under the AVUM Platoon; thereby, making resource control compatible with mission responsibility. All 19 repairers could be placed under the AVUM Platoon with appropriate E6/E7 supervision and 15 of the positions annotated as requiring flying crew member duties. This would provide the AVUM Platoon control over the resources required for mission accomplishment, provide a means of efficient utilization of the aggregate skills of the 19 repairers in a manner commensurate with individual skill and experience, provide centralized management and increased efficiency in conducting the unit SOJT program, and provide a satisfactory means of meeting flying crew chief requirements. This concept, which is currently applicable to the MI Company, Aerial Surveillance (TOE 30-79H5), should be considered for application in all aviation organizations having a low density of repairers per aircraft.

C. FINDINGS.

(1) The MTOE development process contributes to grade/MOS imbalance and poor career development.

(2) Significant variances exist in aviation authorization documents (TOE/MTOE) for similar type organizations.

(3) Current procedures relating to development and application of SGA are ineffective in providing the force developer a means of producing a grade feasible (sustainable) force.

(4) TOE/MTOE/TDA documentation reflects a wide disparity in application of ASI/SQI.

(5) TOE/MTOE/TDA reflect significant errors in application of MOS and duty title.

(6) The current procedure of fragmenting the distribution of maintenance authorizations among flight platoons, operations platoon, company headquarters and maintenance elements is not compatible with manpower authorization criteria or unit training responsibility.

D. RECOMMENDATION. Impose discipline on the document (TOE/MTOE/TDA) development process, in the form of regulatory guidance and managerial

controls, to minimize frequency of document change, attain greater overall document standardization, especially in like organizations, and provide for more efficient manpower utilization.

4. FORCE STRUCTURE ADEQUACY.

A. BACKGROUND. Authorizations for aviation maintenance personnel in grades E3-E5 and for Technical Inspectors are generally established by AR 570-2 (Manpower Authorization Criteria - MACRIT) which is based upon maintenance man-hours required to support specific items of equipment and worker productivity. MACRIT data is provided for all nonsupervisory aviation maintenance MOS except 68M (Helicopter Weapons System Repairer) and 68J (Helicopter Fire Control Repairer). Regulations allow trade-offs between MOS, for positions considered essential to unit operations but not justified by MACRIT, as long as total authorization for positions is not exceeded. The SGA (AR 611-201) provide grade distribution for positions authorized by MACRIT.

B. DISCUSSION.

(1) MACRIT. An attempt was made by the SSG to validate or refute current aviation maintenance manpower authorization criteria by the use of recently collected MMH (Maintenance Man-Hour) and FH (Flight Hour) data. It was and remains the opinion of this SSG that current MACRIT do not accurately reflect current field conditions regarding maintenance requirements and productivity factors. However, an objective assessment of current MACRIT was infeasible because of problems pertaining to quality control and validity of MMH and FH data. A review of MACRIT data, unit maintenance requirements and procedures, and current training policies did identify certain questionable areas. In terms of MMH per FH, a subjective analysis does not support the current CH-47 Technical Inspector requirement being 4.43 times that of the AH-1 nor a UH-1H Technical Inspector requirement 1.11 times greater than the AH-1. Equally questionable is the OV-1C/D repairer requirement being 1.35 times that of the AH-1 and the U-21 repairer requirement being approximately equal to the AH-1. The very low MMH/FH requirement for certain component repairers such as the Aircraft Electrician (MOS 68F) also appears questionable. Experience suggests that more than 47 annual man-hours of electrical work (68F) will be required to support an AH-1S in a combat environment of 780 annual flying hours. This particular problem is confounded by certain component repair work being accomplished by personnel other than those with the appropriate MOS which tends to distort MOS MMH/FH data. This may also be a factor in the increasing Maintenance Error Mishap Rate among aviation maintenance personnel. From a productive man-hour point of view. MACRIT does not appear to adequately recognize the scope of aviation maintenance AIT and the magnitude of the unit Supervised On-The-Job Training (SOJT) responsibility. Current aviation maintenance MOS commanders manuals reflect the following distribution of critical tasks in terms of responsibility for conducting initial training.

CMF 67 AGGREGATE CRITICAL TASKS

	67 Series MOS		68 Series MOS	
	Institutional	SOJT	Institutional	SOJT
Skill Level 1	41.3%	58.7%	66.8%	33.2%
Skill Level 2	6.4%	93.6%	46.9%	53.1%
Skill Level 3	49.7%	50.3%	20.6%	79.4%
Skill Level 1-3	29.4%	70.6%	49.3%	50.7%

NOTE: Additional data contained in Chapter 5.

These percentages can be misleading in that they ignore task complexity and difficulty of teaching. However, a comprehensive review of task distribution further supports the magnitude of unit SOJT responsibility. This is in accordance with AR 351-1 which states "initial entry training combined with unit training qualifies a soldier at Skill Level 1." Therefore, it is obvious that aviation maintenance personnel are not MOS qualified upon graduation from AIT and require significant additional training. Herein rests part of the problem. The aviation force structure and MACRIT no longer recognize helper or assistant repairer requirements. This means a significant potential variance between engineering developed MMH/FH data, which is based on fully qualified personnel, and current field requirements which represents a wide range of capabilities and productivity. This also means that sufficient, technically qualified first-line supervisors must be authorized to teach SOJT tasks and to evaluate subordinate performance. A comparison of unit aviation authorization documents prior to and after changes in training philosophy and responsibility, reflect current unit authorizations to be 1.7% less for E7's and 2.4% greater for E6's. This tends to indicate that previous authorizations were excessive or that current requirements were not adequately addressed. Another factor involves trainability of current accessions - not are they trainable but rather is a greater amount of time required for their training. Based upon 1975 Department of HEW data indicating functional illiteracy in approximately 20% of all American adults over age 17, increases in the percentages of non high school graduates and Category III B and IV personnel among non prior service male accessions, increases in average time spent in the training base, and increased complexity of new equipment; it is assumed that a greater amount of time and effort will be required to con t an effective SOJT program. The magnitude of current unit MOS training re. ponsibility is evident in the following authorizations:

Unit	TOE	No. MOS AUTH	No. CMF AUTH	No. CMF Without E6/E7
Med Hel Co	1-258	21	9	5
Air Cav Trp	17-108	22	9	5

Collectively these MOS represent a large number of diverse tasks for which the unit has training responsibility. Successful execution

necessitates sufficient first-line supervisors. Current aviation maintenance MACRIT does not adequately recognize that 35 percent of all Skill Level 1 and 2 positions must be filled by personnel who have been out of AIT less than 1 year and that training for 63 percent of all Skill Level 1 and 2 tasks is a unit SOJT responsibility. The impact of these conditions is not considered in terms of reduced maintenance capability, reduced maintenance effectiveness, increased repair times, and increased technical supervisory requirements.

Change 10 to AR 570-2, which was effective in November 1978, is generally not reflected in current authorization documents. Table 3-6 and Annex B depict the results of implementing Change 10 upon selected aviation organizations. This represents a change in current authorizations for aviation maintenance personnel of +4% for the UH-1 Combat Support Aviation Co, -13% for the Air Cavalry Troop, -17% for the Attack Helicopter Co, and +2% for the Medium Helicopter Co. These are significant changes in terms of aggregate aviation maintenance capability for the Attack Helicopter Co and Air Cavalry Troop and are even more significant if current authorizations do not fully recognize requirements. An accurate assessment of the impact of Change 10 upon specific MOS requirements cannot be accomplished because of previously identified provisions of AR 570-2 which allow trade-off between MOS requirements.

IMPACT OF NEW MACRIT ON TOE AUTHORIZATIONS*

MOS	CSAC	ACT	AHC	MHC
67N10/20	+4	-1		
67N TI	+1			
67V10/20				+6
67U TI				+14
67V10/20		-1	-4	
67V TI				
67Y10/20			-9	
67Y TI		-1	+1	
68B				-4
68D	-1	-1	+1	-3
68F	-1	-1		-2
68G		-1	-3	-5
68H	-1	-1		-3
TOTAL	+2	-7	-14	+3
% Change	+4%	-13%	-17%	+2%

TYPE UNIT	AUTHORIZATION CHANGE
UH-1 CSAC	2 Additional Personnel
Air Cav Troop (ACT)	7 Less Personnel
Attack Helicopter Co (AHC)	14 Less Personnel
Medium Helicopter Co (MHC)	3 Additional Personnel

NOTE: Additional data contained in Annex B
*AR 570-2, Change 10 effective Nov 1978

TABLE 3-6

(2) CMF 67 SUPERVISORY AUTHORIZATIONS. Current enlisted aviation maintenance authorizations consist of 17,067 positions. This total reflects the May 1979 TAADS decremented for redundant and deactivated unit listings and deletion of 132 positions requiring reclassification in nonaviation MOS (See Appendix B). Excluding TTHS, authorizations by grade are:

CURRENT CMF 67 AUTHORIZATIONS

E3	E4	E5	E6	E7	E8	E9	TOTAL
3645	3978	5289	2364	1451	322	18	17067

An assessment of authorizations by grade and MOS, unit organizational structures, and a review of specific MOS duty responsibilities revealed many contradictory problems. In terms of total authorizations by grade, significantly more E5, E6, and E7 positions were authorized than could be sustained by the force structure. Conversely, it was determined that equally significant shortages existed in certain MOS in those same grades. Furthermore, major supervisory deficiencies in grade E6 were found in certain organizations. For example, no E6's, other than Technical Inspector/Quality Control personnel, are authorized in the Combat Support Aviation Co (UH-1), Command Airplane Co, Medical Air Ambulance Co, Air Cavalry Troop, or Division Aviation Co. Technical first-line supervision is either not authorized or is provided by E7 supervisors who are frequently not technically qualified because of MOS progression patterns or by inappropriate MOS application in the authorization documents. For instance technical supervision for AVUM component repair sections is normally provided by an E7 67Z or 68K; neither of which are technically qualified for first line supervision of Skill Level 1 and 2 personnel in seven diverse MOS.

Technical supervision for crew chiefs in 31 Air Ambulance Platoons/Detachments is provided by Medical Platoon Sergeants (MOS 91B) and in 8 Aero Scout Platoons by Cavalry Platoon Sergeants (MOS 19D).

The current CMF 67 supervisory structure is essentially one which has:

(a) Excess aggregate E5, E6, and E7 authorizations.

(b) Insufficient E5, E6, and E7 authorizations in certain MOS, especially those in 68 series MOS. This results in unacceptable levels of technical supervision and in poor career development opportunities.

(c) Insufficient E6 supervisory positions in all MOS. Current E6 authorizations are poorly distributed in terms of MOS/organizational requirements resulting in a large number of technicians and nonsupervisory positions and few with direct supervisory responsibility.

Poor distribution is apparent in the current TOE structure. A total of 1354 67 series MOS E6 positions are authorized; however, once these are decremented for 821 Technical Inspector/Quality Control positions and 296 E6 crew chief positions, only 237 potential E6 supervisors remain. This remainder, which represents only 17.5% of TOE E6 authorizations, results in one potential E6 supervisor per 34.2 67 series MOS subordinates. TOE authorizations in the 68 series MOS result in one potential E6 supervisor per 17.1 subordinates; however, in both cases the number of subordinates per supervisor is actually larger than indicated because the remaining E6 authorizations include some nonsupervisory positions. In terms of total CMF 67 E6 and E7 authorizations being excessive, current authorizations result in the following relationship between E6/E7 and subordinates:

CURRENT CMF 67 AUTHORIZATIONS

	67 Series MOS	68 Series MOS	TOTAL
Authorized E6	1931	433	2364
Authorized E7	1245	206	1451
Authorized E6/E7	3176	639	3815
Authorized E3-E5	8784	4128	12912
E3-E5 Per E6	4.5	9.5	5.5
E3-E5 Per E7	7.1	20.0	8.9
E3-E5 Per E6/E7	2.8	6.5	3.4

The aggregate force is one which has more supervisory grade authorizations than can be sustained; however, few of these are structured in a manner where there is an actual supervisory/subordinate relationship. This is detrimental to the professional development of the NCO's in that it fails to provide an early opportunity for development of leadership skills. Table 3-7 and 3-8 reflect the portion of 67 series MOS E3-E5 TOE authorizations and 68 series TOE/TDA E3-E5 authorizations without authorized E6 technical supervision. With 52.5 percent of total E3-E5 authorizations lacking E6 technical supervision, E7 supervisors not being technically qualified, and with 63 percent of critical task training being a unit SOJT responsibility, can only result in an ineffective maintenance and training program. The percentage of personnel lacking technical supervision will remain relatively high in MOS 67N, 67T, 67V, and 67Y unless E6 supervisors are authorized in flight platoons or a system similar to that discussed in Chapter 5, Paragraph 4b(4) is adopted.

A soldier can enter CMF 67 and progress from E1 to E6, first as a repairer and crew chief and then as a Technical Inspector; having always been a technician with no inherent opportunity to acquire leadership skills. This system, because of its lack of intermediate leadership opportunity, produces poorly prepared E7 platoon sergeants. This system also, because of the lack of first-line supervisors who are responsible for ensuring that their crew or section subordinates are technically proficient, mandates reduced training effectiveness and technical proficiency.

67 SERIES MOS TOE E3-E5 AUTHORIZATIONS WITHOUT E6 TECHNICAL INSPECTION

	CURRENT		PROPOSED	
MOS	NUMBER	PERCENT	NUMBER	PERCENT
67G	101	29.6%	56	16.4%
67N	1748	53.5%	1404	42.9%
67U	571	53.5%	6	.4%
67V	1227	71.4%	893	52.0%
67Y	1061	65.5%	650	40.1%
67 SERIES AGREE-GATE	4708	58.7%	3009	35.8%

TABLE 3-7

68 SERIES E3-E5 AUTHORIZATIONS WITHOUT E6 TECHNICAL SUPERVISION

	CURRENT		PROPOSED	
MOS	NUMBER	PERCENT	NUMBER	PERCENT
68B	274	40%	11	2%
68D	351	83%	7	2%
68G	564	51%	20	2%
68M	220	36%	25	4%
68J	45	6%	21	3%
68F*	332	93%	192	54%
68H**	235	97%	167	69%
68 SERIES AGGREGATE	2021	49%	443	11%
68 SERIES AGREEGATE LESS 68F and 68H	1454	41%	84	2%

*68F - AIRCRAFT ELECTRICIAN - PROPOSED FOR TRANSFER FOR CMF 28 (AVIONICS)

**68H - PNEUDRAULICS REPAIRER - PROPOSED FOR ELIMINATION

TABLE 3-8

Solution to these problems necessitated recognition of interrelated force structure, personnel management and training issues. Proposed authorizations which are shown below and in greater detail in Appendix B, achieve this purpose.

PROPOSED CMF 67 AUTHORIZATIONS

	E3	E4	E5	E6	E7	E8	E9	TOTAL
Authorization	5062	4891	3690	2046	1157	332	34	17212
Change	+1417	+913	-1599	-318	-294	+10	+16	+145

From an aggregate CMF point of view, the relationship between E6/E7 authorizations and subordinates remains satisfactory:

PROPOSED CMF 67 AUTHORIZATIONS

	67 Series MOS*	68 Series MOS	TOTAL
Authorized E6	1510	536	2046
Authorized E7	853	304	1157
Authorized E6/E7	2363	840	3203
Authorized E3-E5	9515	4128	13643
E3-E5 Per E6	6.3	7.7	6.7
E3-E5 Per E7	11.2	13.6	11.8
E3-E5 Per E6/E7	4.0	4.9	4.3

*Includes 66 Series TI/QC

In addition, proposed authorizations also result in the following changes:

	TOE	TDA	TOTAL
E6 Supervisors	+429	-88	+341
TI/QC Auth	+55	+5	+60
E3-E5 Auth	+612	+119	+731
Total Auth	+280	-135	+145

The proposed force results in the following percentile changes in personnel distribution:

	TOE		TDA	
	68 Series	68 Series	67 Series	68 Series
E6 Supervisors	+129%	+53%	-22%	-10%
Technical Inspectors	+7%		+2%	

NOTE: Additional data located in Annex C.

Attaining significant reductions in mid-level grades concurrently with increases in E6 supervisors and Technical Inspector/Quality Control (TI/QC) personnel, entailed an intensive review of training, personnel management and force structure implications. After determining the capability of the current force structure to support grade-by-grade requirements, further analysis was conducted of current E5, E6, and E7 duty positions to determine what training, skills, and experience were required to satisfactorily perform a particular duty. As an example, this analysis resulted in the conclusion that it did not require seven years of aviation maintenance experience to be a CH-47 crew chief. Seven years was a critical factor because that is the minimum Time In Service (TIS), without waiver, required for promotion to E6 and because all CH-47 crew chief positions are documented as E6 requirements. Similar analysis resulted in the conclusion that with a properly executed training program, E6 crew chiefs were not required on any aircraft and, with the exception of CH-47 and CH-54 aircraft, that crew chief authorizations should be distributed among E3, E4, and E5 authorizations. For CH-47 and CH-54 aircraft, it was deemed that crew chief authorizations should be equally distributed among grades E4 and E5. A similar analysis of TI/QC duties also resulted in a modified grade structure; however, because of the peculiar nature of its implementation, it will be addressed separately. Consequently, by conducting a micro-analysis of all 17,067 positions in the TAADS, it was possible to essentially achieve necessary reductions while simultaneously increasing overall effectiveness and MOS viability.

(3) TECHNICAL INSPECTOR/QUALITY CONTROL (TI/QC). The current TAADS contains significant errors in terms of identifying TI and QC requirements. The current MOS structure contains no provisions for identification of TI's. The lack of a specific MOS or ASI for TI's precludes identification of force structure requirements as well as identification of personnel who are TI qualified. In addition, a large number (38%) of authorized QC positions (MOS 67W) are actually TI positions erroneously classified as 67W. Furthermore, the qualifying course of instruction for MOS 67W, who is responsible for TI supervision, was terminated in October 1978. This results in an impotent system, incapable of identifying TI and QC requirements, incapable of identifying qualified TI and QC personnel to program against undetermined requirements, and in unqualified QC personnel supervising unqualified TI personnel. This is considered a major factor in the increased aviation maintenance error mishap rate and in reduced aviation maintenance technical proficiency.

Grade structure problems in CMF 67 are further complicated by all TI positions being classified at grade E6 and all QC positions classified at grades E6 and E7. A manual review of the TAADS identified 1037 67 series MOS TI/QC E6 positions. A review of TI and QC duties resulted in the conclusion that with appropriate training, these duties could be merged and that seven years of aviation maintenance experience was not required for identification of potential TI/QC personnel.

However, it is further determined that the minimum TIS to grade E5 (3 years without waiver) did not provide for sufficient experience and skill development. In view of the wide-range of skills represented at grade E5 due to TIS requirements to make E6, it was determined that experienced E5's could be identified as potential TI/QC. It was also determined that 58 additional TI/QC positions were required in the force structure. A means of TI/QC identification (both inventory and requirements) and aircraft specific TI/QC qualification courses were also determined to be essential.

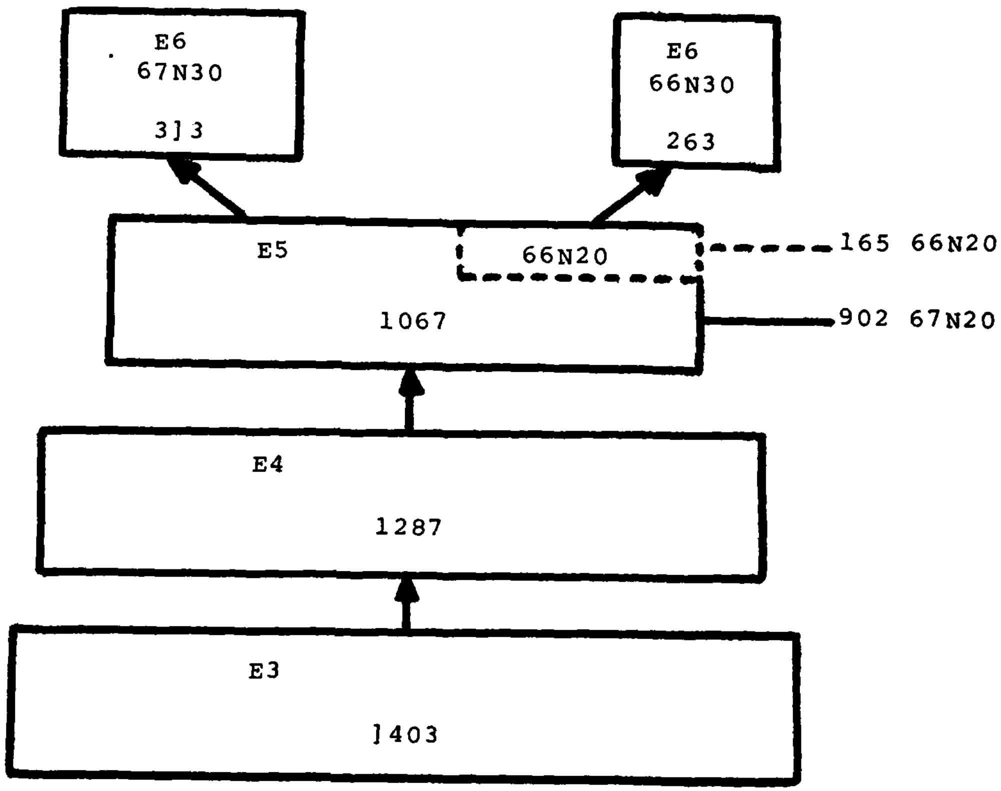
Therefore, a TI/QC program consisting of improved Skill Level 1 training, Skill Level 2 qualification, a minimum 1 1/2 years experience at Skill Level 2 on the appropriate aircraft, unit commander identification as having TI/QC potential, and attendance at an aircraft specific TI/QC course would properly qualify TI/QC personnel. This in turn meant that TI/QC authorizations could be in both grade E5 and E6 which further contributes to the solution of E6 supervisory problems. This also results in longer utilization of TI qualified personnel, increased return on training investments and a reduction of approximately 26% in annual TI/QC training requirements. This procdure in conjunction with formation of aircraft specific TI/QC MOS was applied to all aircraft except the CH-47 and CH-54. In case of the CH-47 and CH-54, all TI/QC positions were classified at grade E6 because of extensive E5 requirements. An ASI was considered in lieu of an MOS for managemet of TI/QC requirements; however, an MOS was considered more effective. This is because an ASI should not represent the sole skills required of a position.

A peculiar aspect of this solution pertains to the distribution between E5 and E6 authorizations. In that proposed E5 TI/QC authorizations are significantly less than E6 authorizations with generally a 35% - 65% relationship (see Annex D for specific authorization), it would appear that E6 requirements were unsustainable. This however, is not the case because E5 authorizations in the TI/QC MOS are actually a part of the aggregate MOS E5 base which is sustaining both E6 supervisory and TI/QC requirements. Graphically this is portrayed in Figure 3-6, using authorizations for the Utility Helicopter (UH-1) as an example.

MOS 66N20 (Utility Helicopter Technical Inspector) E5 authorizations are sustained by migration of 67N20 (Utility Helicopter Repairer) personnel after they attain a minimum of 1 1/2 years Skill Level 2 experience and meet other criteria. Consequently, the 66N20 authorizations (165) represent only a portion of the E5 base (1067) which is sustaining both 67N30 and 66N30 E6 requirements. Analysis indicates that this distribution will adequately sustain E6 requirements and provide appropriate promotion opportunity. It was further determined that authorizations for E5 and E6 must remain in the range of 30%-40% E5's and 60%-70% E6's; otherwise, rapid personnel turnover or promotion stagnation problems will develop at grade E5. This procedure, which is essentially one of recognizing two levels of skill at grade E5

UH-1 REPAIRER AND TECHNICAL INSPECTOR

AUTHORIZATIONS



MOS 67N - Utility Helicopter Repairer
MOS 66N - Utility Helicopter Technical Inspector

FIGURE 3-6

(less than and greater than 1 1/2 years Skill Level 2 experience) would appear to have application potential in other CMF and MOS which possess excesive E6 requirements and duties which can be performed by properly qualified and experienced E5's.

Annual training requirements for 66 series MOS are estimated to be:

MOS	AUTHORIZATIONS E5	AUTHORIZATIONS E6	ANNUAL SCHOOL QUOTAS
66G	22	37	10
66H	13	24	6
66N	165	263	72
66T	16	20	6
66U	-	131	29
66V	86	145	39
*66X	-	-	-
66Y	65	110	30
TOTAL	367	730	192

*Reserve forces only

It is felt that course attendance should be centrally controlled by MILPERCEN with approximately 75% of annual requirements filled by personnel TDY enroute to a new duty station and the remainder attending on a command solicited basis.

C. FINDINGS.

(1) Current aviation maintenance MACRIT does not adequately consider the reduced maintenance capability, reduced maintenance effectiveness, and increased technical supervisory requirements represented by the duties which recent AIT graduates must perform and the significant amount of unit MOS training required for skill level qualification.

(2) The aviation force structure provides in sufficient resources to adequately accomplish the operational mission, perform appropriate maintenance and concurrently execute an effective unit SOJT program for aviation maintenance skills.

(3) The aviation force structure fails to adequately consider training

(4) The distribution of technical supervisors in CMF 67 is unsatisfactory. Fifty-nine of TOE 67 series MOS E3-E5 authorizations and forty-nine percent of TOE/TDA 68 series MOS E3-E5 authorizations lack E6 technical supervision.

(5) The current Technical Inspector/Quality Control program is unsatisfactory.

D. RECOMMENDATIONS.

(1) Validate current criteria for the allocation of aviation maintenance personnel (MACRIT) in terms of the current training program and actual unit maintenance requirements and productivity factors.

(2) Approve the proposed enlisted aviation maintenance force structure in conjunction with associated training and personnel management recommendations.

5. TDA ORGANIZATIONS.

A. BACKGROUND. TDA enlisted authorizations generally contain a larger proportion of supervisory grades due to the special nature of their mission. They frequently have slight or no requirements for a repairer (E3-E5) base but have significant need for supervisory, staff, or instructor positions. Conversely, previously imposed constraints or reductions on the force structure have placed what appears to be a disproportionate share of the reductions on TOE organizations.

B. DISCUSSION. Current distribution of authorizations in CMF 67 by TOE/TDA accounts is:

CURRENT CMF 67 AUTHORIZATIONS

GRADE	TOE		TDA		TOTAL
	No.	%	No.	%	
E9	0	0	18	100	18
E8	158	49	164	51	322
E7	1025	71	426	29	1451
E6	1587	67	777	33	2364
E5	4787	91	502	9	5289
E4	3763	95	215	5	3978
E3	3550	97	95	3	3645
TOTAL	14870	87	2197	13	17067

NOTE: Additional data is contained in Annex E.

This indicates that TDA accounts constitute only 13% of the total CMF authorizations; however, 33% of the top four grades (E6-E9), 100% of E9, 51% of E8, 29% of E7, and 33% of E6 authorizations are in TDA accounts. In view of grade reductions which are necessary in CMF 67 and existing supervisory deficiencies in the current TOE force it is imperative that a portion of the reductions be imposed on the TDA force. Recommendations contained in this Study pertaining to reductions in authorizations or grade levels in TDA activities have not been validated in terms of job analysis or mission. They do, in the case of repairer positions (E3-E5), represent application of

the SGA and, in the case of supervisory positions, represent a recognition that discipline must be applied to TDA activities in ensure an effective distribution of supervisory assets. While many cases of recommended upgrading, downgrading, or elimination of positions may not be appropriate, action must be taken to apply aggregate reductions similar to those recommended, to the overall TDA force. NOTE: Specific data regarding authorization changes for the Transportation School and Aviation Center are shown in ANNEX I.

Proposed authorizations result in the following changes to TOE and TDA authorizations:

GRADE	TOE	TDA	NET
E9	+4	+12	+16
E8	+19	-9	+10
E7	-230	-64	-294
E6	-125	-193	-318
E5	-1366	-233	-1599
E4	+766	+147	+913
E3	+1212	+205	+1417
TOTAL	+280	-135	+145

C. FINDING. TDA organizations contain an excessive share of CMF 67 supervisory (E6-E9) authorizations.

D. RECOMMENDATION. Revise TDA authorizations for aviation maintenance personnel to attain a more efficient distribution of supervisory resources.

6. NEW WEAPON SYSTEM INTRODUCTION.

A. BACKGROUND. The introduction of new weapon systems and new MOS required to operate and maintain these systems tends to complicate the considerations associated with producing an overall MOS structure which will be supportable from both a quantitative and qualitative point of view. This results from a variety of circumstances, among which include the failure to effect an early and accurate assessment of total manpower requirements, special aptitude requirements, skill and experience requirements, and the training and manpower supportability of these requirements. This is especially true in terms of aggregate assessment of the new system requirements concurrently with demands of other systems being simultaneously introduced or sustained. Generally, total manpower requirements associated with the new systems are understated while supervisory grade structure (E6-E7) requirements are overstated in terms of the ability of the training and personnel management system and overall force structure to support these requirements. The requirement for higher grade operators and maintainers is frequently based on increased complexity of the new item, reduced authorizations for operators or maintainers because of enhanced operational or RAM

characteristics, and the view that the operator or maintainer of the replaced item does not posess the necessary skill or experience to satisfactorily perform his current duties. The resultant preception is that an increase in the grade structure for the new item is mandatory. Failure is inevitable with this approach unless it is first determined why the current grade structure is inadequate; secondly, if a higher grade requirement is valid for the new system, a training program must be developed to produce the required skills and an MOS structure created with sufficient lower grade positions to provide for the acquisition of necessary skill and experience.

B. DISCUSSION. The Tactical Transport Helicopter Repairer MOS (67T) associated with the UH-60 helicopter provides an excellent example of these problems. Authorizations for MOS 67T in the Combat Support Aviation Company (CSAC) containing 15 UH-60 helicopters are:

UH-60 CSAC (TOE 7-268T800)

E3	E4	E5	E6	E7*	TOTAL
1	2	12	9	4	28
3.6%	7.1%	42.9%	32.1%	14.3%	100%

*67Z/W

Authorizations for a comparable CSAC with Utility Helicopter Repariers (67N) and 23 UH-1H helicopters are:

UH-1 CSAC (TOE 57-057H320)

	E3	E4	E5	E6	E7	TOTAL
Auth	8	6	30	5	4*	53
%	15.1%	11.3%	56.6%	9.4%	7.6%	100%

*67Z

From a baseline grade structure (67N) in which 73.6% of authorizations are at grades E5, E6, and E7 and which cannot be sustained; we have moved to an even more unstainable structure (67T) with 89.3% of authorizations at grades E5, E6, and E7. It also appears that the authorization of 9 E6 technical supervisors for the supervision and training of 3 Skill Level 1 authorizations is significantly greater than required. The force structure must include sufficient E3 and E4 positions to allow the development of skill and experience required at higher grades. To do otherwise results in invetory and skill deficiencies at grades E5 and E6.

C. FINDING. Introduction of new aviation weapons systems generally tend to exacerbate the force structuring problems noted in this study.

D. RECOMMENDATIONS.

(1) Require early recognition and resolution of manpower supportability issues associated with the acquisition of new weapon systems.

(2) Revise MOS 67T authorizations, duties, and standards of grade in accordance with data contained in Chapter 3.

7. NEW ORGANIZATIONAL CONCEPTS.

A. BACKGROUND. The Study Group attempted, during both the problem identification and resolution stages, to consider current as well as future aviation organizations, training, and personnel requirements. Many of the current CMF 67 grade structure and supervisory problems have evolved during the documentation process by using existing TOE and SGA as baseline development criteria. Frequently these criteria were neither appropriate to the new structure nor supportable in terms of the old structure. Consequently, MOS and grade structure deficiencies tended to be perpetuated in aviation organizations, with some of the adverse features becoming more dominant with each succeeding change. In fairness to the TOE and MTOE proponent, it should be noted that this approach is not unreasonable. He should be able to assume that the current SGA is appropriate and the current organization supportable and therefore be able to develop a new organization is terms of adjustments to a comparable organization. Furthermore he has no means of assessing the impact of a specific change upon the aggregate structure nor the supportability of the aggregate structure. This situation will continue until effective procedures are established for centralized review and assessment of organizational change and MOS supportability and better tools are provided the force developer.

B. DISCUSSION.

(1) DIVISION 86 AIR CAVALRY ATTACK BRIGADE. The proposed Air Cavalry Attack Brigade (ACAB) (TOE 17-201S620, dated April 24, 1980) was reviewed in terms of aviation organizational structure, MOS and grade authorizations, NCO supervisory capability, and training implications. It generally tends to perpetuate or exacerbate current deficiencies of CMF 67. Specifically it has failed to recognize current CMF 67 grade structure, career progression, supervisory, and training programs. Consequently, under current procedures, it will result in a structure in which CMF 67 grade and skill requirements cannot be met, one where AIT will be incompatible with the duty positions which graduates must fill, and where technical supervisor authorizations are incompatible with supervisory responsibility and the magnitude of unit SOJT responsibility.

The ACAB consists of a Headquarters and Headquarters Troop (HHT), two Attack Helicopter Battalions (AHB), a Combat Support Aviation Battalion (CSAB), and a Reconnaissance Squadron (RS). The ACAB for the Heavy Division is authorized 1598 enlisted personnel of which 534 are in CMF 67 and the Light Division is authorized 2110 enlisted personnel of which 595 are in CMF 67.

The two AHB each consist of a Headquarters and Service Company and three Attack Helicopter Companies (AHC) and are authorized 190 enlisted personnel. The AHC, of which there are six per Brigade, are very small organizations with 11 helicopters, a total authorization of 19 enlisted personnel and provide no technical supervision for the 11 E3-E5 CMF 67 repairers.

The CSAB consists of a Headquarters and Headquarters Company (HHC), a General Support Aviation Company (GSAC), a Combat Support Aviation Company - 2 in the Light Division (CSAC), a Special Electronics Mission Aviation Company (SEMA), a Transportation Aircraft Maintenance Company (TAMC), and are authorized 767 (921 Light Division) enlisted personnel. The GSAC is authorized 22 helicopters and 99 enlisted personnel. The CSAC is authorized 15 helicopters and 109 enlisted personnel. The SEMA is authorized 12 helicopters and 87 enlisted personnel and the TAMC is authorized 2 helicopters and 223 enlisted personnel (231 Light Division).

The RS consists of a HHT, two Ground Reconnaissance Troops (GRT), two Aerial Reconnaissance Troops (ART), and is authorized 496 enlisted personnel of which 57 are in CMF 67. The GRT are each authorized 101 enlisted personnel, non of which are in CMF 67. The ART are very small organizations each with 10 helicopters and 19 enlisted personnel and include no technical supervision for the 11 CMF 67 E3-E5 repairers.

As previously noted, the ACAB contains the same enlisted aviation maintenance deficiencies of the current aggregate structure. Promotion opportunity to E5 and E6 in the 68 Series MOS is very limited and excessive E5 authorizations in the 67 series MOS mandate that E3 and E4's will fill E5 positions. In addition, TIS requirements to E6 and TIG as an E5 will be significantly higher in CMF 67 than the Army wide average. Eight of ten flying organizations have no E6 authorizations. Therefore technical supervision and the ability to perform unit SOJT is nonexistent in the eight AHC and ART. Additionally, E7 and E8 authorizations represent a significant increase in CMF 67. It is imperative that any attempt to provide a more combat effective aviation organization for the Army Division recognize enlisted grade structure deficiencies, career progression problems, and training implications. NOTE: Additional ACAB data is located in ANNEX G

(2) <u>ARMY AVIATION PERSONNEL REQUIREMENTS FOR SUSTAINED OPERATIONS STUDY (AAPRSO)</u>. A brief review was conducted of this study regarding impact upon CMF 67 personnel. In summary, it was felt certain assumptions and methodology were highly questionable. These included the availability of

aircraft repairer qualified door gunners, the capability of flying crew chiefs and door gunners to perform 1250-1350 annual hours of aircraft maintenance in addition to incurring increased flying requirements under sustained operations (+12% UH-1 and +63% CH-47 crew chief), and an absence of increased requirements for armament repairers (MOS 68M and 68J), avonics personnel, technical inspectors, and supervisors.

(3) CMF 67 PROJECTED PERSONNEL REQUIREMENTS. Projected personnel requirements for CMF 67 through FY 86 are indicated in Annex H. The figures were derived from PERSACS as of month end January 1979 with manual adjustments to compensate for inadequate TAADS documentation and programmed force structure changes. Change in equipment availability or mission priority could impact upon this data. These requirements, which do not reflect implementation of study recommended MOS changes, would be significantly altered by approval of study recommendations.

C. FINDINGS.

(1) Proposed authorizations and organizational structure of the Air Cavalry Attack Brigade does not adequately consider current CMF 67 grade structure deficiencies, career progression problems, and training responsibility.

(2) The Army Aviation Personnel Requirements for Sustained Operations Study (AAPRSO) does not adequately consider requirements for or capabilities of enlisted aviation maintenance personnel under sustained operations.

D. RECOMMENDATION. Ensure that proposed structures adequately recognize enlisted personnel requirements and capabilities.

8. PROPOSED STRUCTURE.

A. BACKGROUND. The current enlisted aviation maintenance authorization structure (Table 3-1) represents aggregate authorizations by grade and MOS for all TOE and TDA organizations in the TAADS. Collectively these authorizations constitute insufficient E3 and E4 positions and excessive E5, E6, and E7 positions. Furthermore, certain MOS have inadequate authorizations at grades E6 and E7 and a large number of organizations have insufficient first-line supervisor authorizations. Also authorization documents (TAADS) reflect significant errors regarding MOS classification and duty title.

B. DISCUSSION. The proposed authorization structure (Table 3-1), which is an increase of 145 positions, represents aggregate authorizations by MOS and grade for each TOE and TDA organization in the TAADS after application of newly developed SGA (Appendix D) and rectification of problems noted in Chapter 3, sections 2-5. In the case of MOS 68J (Aircraft Fire Control System Repairer) and 68M (Aircraft Armament System Repairer), proposed authorizations authorize implementation of Change 13, AR 611-201 which

alters duty responsibility and MOS distribution. The proposed structure contains all previously authorized repairer and crew chief positions, 60 additional TI/QC positions, and 341 additional E6 first-line supervisor positions. The proposed structure results in the following grade distribution:

PROPOSED AUTHORIZATIONS

Grade	Authorization	Change from Current
E9	34	+16
E8	332	+10
E7	1157	-294
E6	2046	-318
E5	3690	-1599
E4	4891	+913
E3	5062	+1417
TOTAL	17212	+145

Application of new SGA on selected aviation TOE are shown in Appendix C with specific authorizations by organization reflected in Appendix E.

C. FINDING. The current enlisted aviation maintenance authorization structure is unsupportable in terms of grade distribution and does not effectively meet the needs of the Army.

D. RECOMMENDATION. Approve the proposed CMF 67 authorization structure.

9. AERIAL SCOUT OBSERVERS.

A. BACKGROUND. Aerial scout observers (MOS 19D2F) are currently reflected in Attack Helicopter Company (AHC) and Air Cavalry Troop (ACT) TOE documents as either authorizations or augmentation positions. All requirements are documented as E5 positions in the Aerial Scout Platoon and are provided on the basis of one per observation helicopter (OH-58). TOE's generally authorize 12 19D2F in the AHC, while 9 or 10 19D2F are provided as augmentations in the ACT.

B. DISCUSSION. Using TOE authorizations and the current TAADS structure, a total of 117 19D2F aerial scout observers are authorized with approximately 440 additional requirements under augmentation conditions. Inconsistencies regarding their basis of authorization, training, and performance of aerial reconnaissance/target acquisition duties when aerial scout observers are not authorized have created peacetime and mobilization problems. In units where scout observers are authorized (primarily AHC's), the 19D2F performs the mission. However, in the majority of cases, scout observer positions are augmentations which results in observer duties being performed during peacetime by the OH-58 crew chief (67V10/20). To the crew chief, this is desirable because it allows him to draw crew member flight pay even though it is a source of discontent to 67V crew chiefs in Attack Helicopter and

Division Aviation Companies who may be flying but are not authorized flight status. However, of greater concern is the resultant impact upon unit maintenance capability where 67V crew chiefs are regularly employed as aerial observers. AR 570-2, Change 10 (TOE Manpower Authorization Criteria - MACRIT) authorizes 1.05 repairers/crew chief per observation helicopter in ACT's and AHC's and specifies that OH-58 aircrat are not authorized flying crew chiefs. It further states that flying crew chiefs are considered to be 50 percent productive in terms of aircraft maintenance capabilities.

Therefore, the regulatory allowances regarding flying crew chiefs productivity has not been applied in the development of 67V authorizations for units where they perform as aerial scout observers. Consequently there is a significant reduction in unit maintenance capabili As an example, in an ACT with 10 OH-58 helicopters, a total of 11 (10 X ..05 = 10.5) 67V crew chiefs/repairers are authorized under AR 570-2. However, with the recognition of reduced maintenance capability resulting from crew chief flying duties, a total of 16 crew chiefs would be required if crew chiefs were also serving as aerial scout observers.

The mobilization aspect of the aerial scout observer concept appears equally unsound. With the preponderance of the positions being 19D2F augmentations, an initial question arises as to the source of 19D personnel under mobilization conditions and will they be trained for aerial observer duties? From the point of view of overall 19D requirements, it appears unlikely that they would be available in a timely manner. Even if they are available, it appears illogical to train aerial scout platoons for combat; which entails development of aerial navigation, reconnaissance, and target acquisition skills in the observer and then upon mobilization replace the 67V who has been trained, with a 19D.

From an AIT point of view, neither the 19D or 67V receive the specific training required of an aerial scout observer. However, both receive MOS specific training which would enhance their ultimate skill development as an aerial scout observer.

A key aspect in solving this problem appears to be associated with the role of the aerial scout observer. If he is, as perceived by this study, a required crew member in the Aerial Scout Platoon aircraft; then it appears essential that the position be authorized (regardless of MOS) in peacetime as with other weapon systems. Only in this manner can the inherent crew skills pertaining to aerial navigation, reconnaissance, and target acquisition be developed. Conversely, if it is to remain an augmentation position with 67V crew chiefs performing the duties during peacetime, MACRIT data for 67V's in AHC and ACT must be modified to recognize the loss in maintenance productivity.

C. FINDING. Policies relating to aerial scout observers are inconsistent with wartime requirements.

D. RECOMMENDATION. Validate the aerial scout observer program in terms of personnel authorizations, MOS classification, training, employment, and attainment of mobilization requirements.

10. HELICOPTER DOOR GUNNERS.

A. BACKGROUND. Door gunners are currently authorized as augmentation positions in TOE documents on the basis of one per authorized medium, tactical transport, and utility helicopter (excluding air ambulance aircraft). All door gunner requirements are documented as E4 positions in the helicopter repairer MOS appropriate to the type of aircraft authorized; i.e., 67N1F E4 authorized as door gunner in UH-1 helicopters.

B. DISCUSSION. Based on the criteria noted above, the current TAADS structure includes approximately 1630 augmentation positions for door gunners (1260 67N1F, 90 67T1F, and 280 67U1F). This does not include Reserve Component door gunner requirements. This results in certain inherent mobilization problems in terms of the total number of personnel required to fill these positions and the training associated with qualifying them as Skill Level 1 repairers and door gunners. These problems relate to where will personnel be acquired to meet requirements, are these requirements valid, and when do they receive their aircraft repairer and door gunner training in a "come as you are" war?

It appears that the solution to this problem first requires an assessment of the validity of current door gunner authorizations. Specifically, is one door gunner required for each UH-1, UH-60, and CH-47 aircraft? This question entails resolution of door gunner effectiveness in terms of both tactical and aircraft maintenance considerations as well as comparison of tactical requirements with reductions in aircraft capabilities by virtue of one position on the aircraft be delegated to the door gunner. Also is a ratio of less than one door gunner per aircraft appropriate to certain types of aircraft by virtue of the frequency of their being able to effectively employ a door gunner.

If current door gunner policies are valid, some means must be established to meet these requirements under mobilization conditions. Sufficient personnel are not readily available from the Individual Ready Reserve (IRR). In view of significant mobilization requirements for combat occupational specialties, it does not appear that reassignment of personnel possessing or undergoing training in these MOS are viable solutions. Consequently, if requirements are to be met, trained personnel must be available at mobilization or a means must exist to access and train sufficient personnel during the period between mobilization and the start of hostilities. Otherwise, requirements will go unfilled or will be filled by other authorized unit maintenance personnel which will degrade the unit maintenance capability. This appears to suggest a program where trained personnel are available but working in some other capacity during peacetime but are available to meet mobilization requirements. However, this solution

does not appear to be pragmatic under austere manning conditions nor is it an efficient utilization of training resources.

If door gunners must be accessed and trained after mobilization, modification of duties and training appear essential. This could result in a new MOS (wartime only) such as 67D which would be authorized at Skill Level 1 and 2 for door gunners. AIT for personnel in this MOS, could entail training of approximately six weeks, consisting of a general overview of helicopter principles, maintenance procedures, safety practices, refueling and servicing procedures, and specific door gunner training regarding weapon operation and maintenance. This would reduce the maintenance capabilities of the door gunner but it would also allow personnel to be selected from a larger audience (assuming reduced prerequisites) and be trained in a shorter time period. Career progression could either be along door gunner lines or dependent upon individual capabilities, into the basic aircraft repairer MOS.

C. FINDING. The current door gunner program is incompatible with mobilization requirements.

D. RECOMMENDATION. Validate the current door gunner concept in terms of current and future requirements, duties, training, and ability to attain mobilization requirements.

ANNEX A

CURRENT STRUCTURAL DISPARITY

Organization	E6/E7 Authorizations	E3-E5 Authorizations	E3-E5 Per E6/E7
NON-DIV AVIM (55-459H5)			
Maint Plt	10	61	6.1
Shop Plt	4	76	19.0
Avonics/Arma Plt	3	44	14.7
DIV AVIM (55-424H0)			
Maint Plt	3	42	14.0
Shop Plt	4	31	7.8
Avonics/Arma Plt	7	45	6.4
MED HEL CO (55-167H7)			
AVUM Plt	11	141	12.8
Hel Plt (8 Helicopters)	9	0	0
DIV AVN CO (17-087H0)			
AVUM Plt	11	47	4.3
Gen Spt Plt (46 Helicopters)	1	47	47.0
CBT SPT AVN CO (7-268T8) (UH-60)			
AVUM Plt	10	25	2.5
Hel Plt (7 Helicopters)	3	6	2.0
CBT SPT AVN CO (57-57H3) (UH-1)			
AVUM Plt	9	56	6.2
Hel Plt (11 Helicopters)	1	11	11.0

ANNEX B

TOE - MACRIT AUTHORIZATIONS

(AR 570-2, Change 10)

UH-1 CSAC TOE 57-57H320

CATEGORY I (23 UH-1)

MOS	TOE Auth	MACRIT Auth	Change
67N10/20	43	47	+4
67N TI	5	6	+1
68B	2	2	0
68D	2	1	-1
68F	1	0	-1
68G	2	2	0
68H	1	0	-1
TOTAL	56	58	+2

AIR CAV TROOP TOE 17-108H000

CATEGORY I (9 AH-1, 10 OH-58, 7 UH-1)

MOS	TOE Auth	MACRIT Auth	Change
67Y10/20	14	14	0
67Y TI	3	2	-1
67V10/20	12	11	-1
67V TI	2	2	0
67N10/20	15	14	-1
67N TI	2	2	0
68B	1	1	0
68D	2	1	-1
68F	1	0	-1
68G	4	3	-1
68H	1	0	-1
TOTAL	57	50	-7

ATTACK HELICOPTER COMPANY TOE 17-387H710

CATEGORY I (21 AH-1, 12 OH-58, 3 UH-1)

MOS	TOE Auth	MACRIT Auth	Change
67Y10/20	41	32	-9
67Y TI	3	4	+1
67V10/20	17	13	-4
67V TI	2	2	0
67N10/20	6	6	0
67N TI	1	1	0
68B	2	2	0
68D	1	2	+1
68F	1	1	0
68G	6	3	-3
68H	1	1	0
TOTAL	81	67	-14

TRANSPORTATION MEDIUM HELICOPTER COMPANY

TOE 55-167H700 CATEGORY II (24 CH-47, 1 UH-1)

MOS	TOE Auth	MACRIT Auth	Change
67U10/20	105	111	+6
67U TI	4	18	+14
67N10/20	2	2	0
67NTI	0	0	0
68B	6	2	-4
68D	11	8	-3
68F	4	2	-2
68G	8	3	-5
68H	4	1	-3
TOTAL	144	147	+3

ANNEX C

CMF 67 E6 SUPERVISOR SUMMARY

67/68 SERIES AUTHORIZATIONS

	Current	Proposed	Change
TOE	470	899	+429
TDA	505	417	-88
TOTAL	975	1316	+341

67 SERIES AUTHORIZATIONS

	Current	Proposed	Change
TOE	237	542	+305
TDA	307	238	-69
TOTAL	544	780	+236

68 SERIES AUTHORIZATIONS

	Current	Proposed	Change
TOE	233	357	+124
TDA	198	179	-19
TOTAL	431	536	+105

TECHNICAL INSPECTOR AUTHORIZATIONS

	Current	Proposed	Change
TOE	821	876	+55
TDA	216	221	+5
TOTAL	1037	1097	+60

Net change in authorizations:

a. 429 additional E6 supervisors in TOE.
b. 55 additional TI's in TOE.
c. 88 less E6 supervisors in TDA.
d. 5 additional TI's in TDA.
e. Above accomplished concurrently with an overall reduction of 318 E6 authorizations.

E6 SUPERVISOR AUTHORIZATIONS

CURRENT TOE

	67 Series	68 Series	Total
E6 Authorizations	1354	233	1587
Less TI's	821	-	821
	533	233	766
Less Crew Chief	296	-	296
E6 Supervisors	237	233	470
E3/E5 Authorizations	8116	3984	12100
E3/E5 Per Supervisor	34.2	17.1	25.7

PROPOSED TOE*

	67 Series	68 Series	Total
E6 Supervisors	542	357	899
E3/E5 Authorizations	8415	3984	12399
E3/E5 Per Supervisor	15.5	11.2	13.8

CURRENT TDA

	67 Series	68 Series	Total
E6 Authorizations	577	200	777
Less TI's	216	2	218
	361	198	559
Less Crew Chief	54	-	54
E6 Supervisors	307	198	505
E3/E5 Authorizations	668	144	812
E3/E5 Per Supervisor	2.2	0.7	1.6

PROPOSED TDA*

	67 Series	68 Series	Total
E6 Supervisors	238	179	417
E3/E5 Authorizations	733	144	877
E3/E5 Per Supervisor	3.1	0.8	2.1

*Excludes E5/E6 66 series MOS TI's

CMF 67 SUPERVISOR/SUBORDINATE RELATIONSHIP

CURRENT

	67 Series	68 Series	Total
Authorized E6	1931	433	2364
Authorized E7	1245	206	1451
Authorized E6/E7	3176	639	3815
Authorized E3-E5	8784	4128	12912
E3-E5 Per E6	4.5	9.5	5.5
E3-E5 Per E7	7.1	20.0	8.9
E3-E5 Per E6/E7	2.8	6.5	3.4

PROPOSED

	67 Series*	68 Series	Total
Authorized E6	1510	536	2046
Authorized E7	853	304	1157
Authorized E6/E7	2363	840	3203
Authorized E3-E5	9515	4128	13643
E3-E5 Per E6	6.3	7.7	6.7
E3-E5 Per E7	11.1	13.6	11.8
E3-E5 Per E6/E7	4.0	4.9	4.3

*Includes 66 Series TI/QC

67 SERIES MOS

TECHNICAL INSPECTOR/QUALITY CONTROL AUTHORIZATIONS

CURRENT

	TOE	TDA	TOTAL
TI/QC Authorizations	821	216	1037
E3/E5 Authorizations	12100	812	12912
E3/E5 Per TI/QC	14.7	3.8	12.5

PROPOSED

	TOE	TDA	TOTAL
TI/QC Authorizations	876	221	1097
E3/E5 Authorizations	12399	877	13276
E3/E5 Per TI/QC	14.2	4.0	12.1

ANNEX D

COMPARISON OF 67 SERIES MOS

TECHNICAL INSPECTOR AUTHORIZATIONS

MOS*	GRADE	CURRENT**	PROPOSED	DIFFERENCE	
66G	E6	90	37	-53	
66G	E5	N/A	22	+22	
66H	E6	N/A	24	+24	
66H	E5	N/A	13	+13	+6
66N	E6	430	263	-167	
66N	E5	N/A	165	+165	-2
66T	E6	28	20	-8	
66T	E5	N/A	16	+16	+8
66U	E6	85	131	+46	+46
66V	E6	227	145	-82	
66V	E5	N/A	86	+86	+4
66X	E6	0	0	0	0
66Y	E6	177	110	-67	
66Y	E5	N/A	65	+65	-2
TOTAL		1037	1097		+60

*New MOS used for current authorization
**67W E6 positions merged with 67 series Technical Inspectors

ANNEX E

PRESENT AUTHORZATIONS (TAADS)

PERCENTAGE DISTRIBUTION BY TOE-TDA

GRADE	67 SERIES MOS TOE	67 SERIES MOS TDA	67 SERIES MOS TOTAL	68 SERIES MOS TOE	68 SERIES MOS TDA	68 SERIES MOS TOTAL	CMF 67 AGGREGATE TOE	CMF 67 AGGREGATE TDA	CMF 67 AGGREGATE TOTAL
E9	0	18/100%	18	0	0	0	0	18	18
E8	158/49%	164/51%	322	0	0	0	158/49%	164/51%	322
E7	909/73%	336/27%	1245	116/56%	90/44%	206	1025/71%	426/29%	1451
E6	1354/70%	577/30%	1931	233/54%	200/46%	433	1587/67%	777/33%	2364
E5	3910/89%	463/11%	4373	877/96%	39/4%	916	4787/91%	502/9%	5289
E4	2293/94%	146/6%	2439	1470/96%	69/4%	1539	3763/95%	215/5%	3978
E3	1913/97%	59/3%	1972	1637/98%	36/2%	1673	3550/97%	95/3%	3645
TOTAL	10537/86%	1763/14%	12300	4333/91%	434/9%	4767	14870/87%	2197/13%	17067

PROPOSED AUTHORIZATIONS

GRADE	66 SERIES MOS TOE	66 SERIES MOS TDA	66 SERIES MOS TOTAL	67 SERIES MOS TOE	67 SERIES MOS TDA	67 SERIES MOS TOTAL	68 SERIES MOS TOE	68 SERIES MOS TDA	68 SERIES MOS TOTAL	CMF 67 AGGREGATE TOE	CMF 67 AGGREGATE TDA	CMF 67 AGGREGATE TOTAL
E9				4/12%	30/88%	34	0	0	0	4/12%	30/88%	34
E8				177/53%	155/47%	332	0	0	0	177/53%	155/47%	332
E7				616/72%	237/28%	853	179/59%	125/41%	304	795/69%	362/31%	1157
E6	563/77%	167/23%	730	542/69%	238/31%	780	357/67%	179/33%	536	1462/71%	584/29%	2046
E5	313/85%	54/15%	367	2066/92%	185/8%	2251	1042/97%	30/3%	1072	3421/95%	269/7%	3690
E4				3061/91%	294/9%	3355	1468/96%	68/4%	1536	4529/93%	362/7%	4891
E3				3288/93%	254/7%	3542	1474/97%	46/3%	1520	4762/94%	300/6%	5062
TOTAL	876/80%	221/20%	1097	9754/88%	1393/12%	11147	4520/91%	448/9%	4968	15150/88%	2062/12%	17212

EXCLUDES TTHS

* TI Postions included in 67 Series totals

CMF 67
TDA DISTRIBUTION

	CURRENT								PROPOSED							
MOS	E3	E4	E5	E6 *	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
66G											11	26				37
66H											5	13				18
66N											22	58				80
66T											4	8				12
66U											0	33				33
66V											7	13				20
66X**											0	0				0
66Y											5	16				21
66 SERIES TOTAL											54	167				221
67Z					336	164	18	518					213	155	30	398
67G	21	61	146	111				339	75	85	45	9	24			238
67H	Included in 67G							0	12	13	6	6				37
67N	17	52	247	211				527	127	113	78	113				431
67T	0	1	0	20				21	0	1	0	5				6
67U	8	7	20	124				159	9	41	40	36				126
67V	6	13	25	43				87	15	22	7	23				67
67X**				6				6				4				4
67Y	7	12	25	62				106	16	19	9	42				86
67 SERIES TOTAL	59	146	463	577	336	164	18	1763	254	294	185	238	237	155	30	1393
68B	3	9	7	21				40	5	13	1					19
68D	2	5	6	14				27	4	5	4					13
68G	6	17	7	40				70	10	16	4					30
68F	5	6	8	16				35	5	9	5	17				36
68H	1	5	3	4				13	3	3	3	3				12
68J	4	7	2	69				82	10	12	8	83	56			169
68M	15	20	6	36				77	9	10	5					24
68K					90			90				76	69			145
68 SERIES TOTAL	36	69	39	200	90			434	46	68	30	179	125			448
CMF TOTAL	95	215	502	777	426	164	18	2197	300	362	269	584	362	155	30	2062

*MOS 67W redistributed into 67 series MOS

**MOS proposed for Reserve Forces only

CURRENT TDA AUTHORIZATIONS

(% of Total Authorizations in TDA Activities)

MOS	E5	E6	E7	E8	E9	E3-E9 TOTAL
67G	38.9	67.3				46.2
67N	11.1	32.1				12.4
67T	0	27.0				12.7
67U	7.9	24.9				9.9
67V	3.3	14.5				4.2
67Y	3.6	26.5				5.6
67Z	N/A	N/A	27.0	50.9	100.0	32.7
67 Total	10.6	29.9	27.0	50.9	100.0	14.3
68B	4.3	34.4				5.4
68D	9.2	66.7				6.1
68G	2.2	47.1				5.9
68F	9.0	88.9				9.4
68H	7.3	80.0				5.2
68J	1.6	42.1				9.4
68M	5.3	45.6				11.2
68K	N/A	N/A	43.7			43.7
68 Total	4.3	46.2	43.7	N/A	N/A	9.1
CMF Total	9.5	32.9	29.4	50.9	100.0	12.9

PROPOSED TDA AUTHORIZATIONS
(% of Total Authorizations in TDA Activities)

MOS	E5	E6	E7	E8	E9	E3-E9 TOTAL
66G	50.0	70.3				62.7
66H	38.5	54.2				48.6
66N	13.3	22.1				18.7
66T	25.0	40.0				33.3
66U	N/A	25.2				25.2
66V	8.1	9.0				8.7
66Y	7.7	14.5				12.0
66 Total	14.7	22.9				20.1
67G	63.5	42.9	46.2			53.8
67H	13.6	46.2				16.7
67N	8.6	36.1				11.0
67T	0	45.5				4.8
67U	10.7	26.5				8.0
67V	1.6	18.0				3.5
67Y	2.3	27.3				4.7
67Z	N/A	N/A	26.6	46.7	88.2	34.1
67 Total	8.2	30.5	27.8	46.7	88.2	12.5
68B	0.6					2.8
68D	3.7					3.1
68G	1.3					2.7
68F	5.8	44.7	N/A			9.1
68H	5.9	12.0	N/A			4.5
68J	4.2	47.2	57.7			16.9
68M	3.1	N/A				4.1
68K	N/A	25.6	33.3			28.8
68 Total	2.8	33.4	41.1			9.0
CMF Total	7.3	28.5	31.3	46.7	88.2	12.0

CMF 67 GRADE DISTRIBUTION

	E3	E4	E5	E6	E7	E8	E9	TOTAL
CURRENT (TAADS)	3645	3978	5289	2364	1451	322	18	17067
%	21.3%	23.3%	31.0%	13.9%	8.5%	1.9%	.1%	100%
PROPOSED	5062	4891	3690	2046	1157	322	34	17212
%	29.4%	28.4%	21.4%	11.9%	6.7%	2.0%	.2%	100%
CURRENT OPERATING*	4929	4259	4666	2521	1438	308	32	18153
%	27.1%	23.5%	25.7%	13.9%	7.9%	1.7%	.2%	100%

*ME JUNE 79 - EXCLUDES TTHS

ANNEX F

CMF 67

TOE DISTRIBUTION

MOS	CURRENT E3	E4	E5	E6*	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
66G											11	11				22
66H											8	11				19
66N											143	205				348
66T											12	12				24
66U											0	98				98
66V											79	132				211
66X**											0	0				0
66Y											60	94				154
66 SERIES TOTAL											313	563				876
67Z					909	158		1067					588	177		769
67G	38	74	229	54				395	70	54	40	12	28			204
67H	Included in 67G							0	71	69	38	7				185
67N	555	745	1970	447				3717	1276	1174	824	200				3474
67T	6	12	72	54				144	48	36	30	6				120
67U	533	310	233	373				1449	531	482	333	100				1446
67V	288	687	743	254				1972	673	624	421	105				1823
67X**								0								0
67Y	493	465	663	172				1793	619	622	380	112				1733
67 SERIES TOTAL	1913	2293	3910	1354	909	158	0	10537	3288	3061	2066	542	616	177	4	9754
68B	274	237	155	40				706	258	233	175					666
68D	212	140	59	7				418	152	154	105					411
68G	408	349	315	45				1117	396	380	296					1072
68F	145	111	81	2				339	135	121	81	21				358
68H	136	60	38	1				235	69	117	48	22				256
68J	270	305	121	95				791	254	260	182	93	41			830
68M	172	268	108	43				611	210	203	155					568
68K					116			116				221	138			359
68 SERIES TOTAL	1637	1470	877	233	116	0	0	4333	1474	1468	1042	357	179			4520
CMF TOTAL	3550	3763	4787	1587	1025	158	0	14870	4762	4529	3421	14624	795	177	4	15150

*MOS 67W redistributed into 67 series MOS

**MOS proposed for Reserve Forces only

ANNEX G

AIR CAVALRY ATTACK BRIGADE

CMF 67 AUTHORIZATIONS

MOS	E3	E4	E5	E6	E7	E8	E9	TOTAL
67T*	10	15	49	20				94
67V	15	27	28	11				81
67Y	24	31	35	14				104
67W				4	2			6
67Z					33	12	0	45
67 Series	49	73	112	49	35	12	0	330
% Distribution	14.8	22.1	33.9	14.8	10.6	3.6	0	100
68B	7	11	3	2				28
68D	9	6	1	2				18
68F	8	1	1	2				12
68G	12	10	4	2				28
68H	7	1	1	1				10
68J	11	8	6	5				30
68M	14	22	7	5				48
68K					7			7
68 Series	68	59	23	19	7	0	0	176
% Distribution	21.9	33.1	12.9	10.7	3.9	1.1	0	100

*Excludes door gunner augmentation positions

ANNEX H

PROJECTED CMF 67 REQUIREMENTS

MOS	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
67G	689	693	746	746	746	743	743
67N	4299	3453	2942	2227	1700	1568	1559
67T	332	629	943	1391	1712	1792	1792
67U	1531	1531	1469	1469	1469	1818	1824
67V	2422	2465	2506	2556	2554	2559	2559
67W	584	589	580	589	591	611	615
67X*	8	8	8	8	8	8	8
67Y	1925	1958	2037	2222	2217	2535	2535
67Z	1503	1507	1458	1482	1484	1540	1539
SUB TOTAL:	13293	12833	12689	12690	12481	13174	13174

MOS	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
68B	727	751	758	762	770	817	820
68D	459	472	468	459	478	555	556
68F	376	386	390	395	398	424	424
68G	1239	1271	1286	1286	1296	1352	1352
68H	251	256	260	262	265	287	289
68J	983	1067	1126	1107	1107	1125	1132
68K	206	211	211	215	216	236	239
68M	737	756	766	829	826	953	958
SUB TOTAL:	4978	5170	5265	5315	5356	5356	5770

Grand Total:	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
	18271	18003	17954	18005	17837	18530	18944

*MOS proposed for Reserves Forces only.

ANNEX I

TRANSPORTATION SCHOOL/AVIATION CENTER

E3	E4	E5	E5 TI	E6 TI	E6	E7	E8	E9	TOTAL
+2	+9	+21	+30	+18	-100	+6	NC	NC	-14

E5	TI	E6
+51	+48	-82

TI/E6 -52*

*-32 67U CREW CHIEFS

E5/E6/E7 -25

PERCENT OF ARMY AUTH

TRANS SCH/AVN CENTER

GRADE	CURRENT	PROPOSED
E9	56%	29%
E8	12%	12%
E7	17%	22%
E6	22%	22%
TI	5%	9%
TI/E6-E9	20%	22%
TOTAL E3-E9	5.4%	5.3%

CHAPTER 4

PERSONNEL

CONTENTS

CHAPTER 4

PERSONNEL

1. INTRODUCTION. Career Management Fields (CMF) are groupings of related MOS that are basically self-renewing, that is, they should have a first term base of sufficient strength to replace normal personnel losses from the career force in higher grades. Many CMF are further divided into Career Management subfields which contain groupings of the most closely related MOS within the CMF. CMF 67 has subfields; however, they do not meet the conditions previously outlined for subfields. For example, current subfield 671 combines fixed wing and rotary wing repair MOS. There is little commonality among rotary wing repair MOS and the fixed wing repair MOS. This same grouping of unrelated MOS exists in the aircraft components repair subfield. Proposed action includes rearranging these MOS into better alignment in terms of placing related MOS together. A new MOS is introduced to be associated with the OV-1 airplane, new MOS are introduced for use with technical inspectors, references to operation and recovery of target aircraft are omitted from the fixed wing repair MOS, and career progression is changed for many MOS.

The fixed grade concept in which most crew chief duty position titles in the current structure have been graded E5 (E6 for the CH-47 helicopter) is primarily responsible for CMF 67 having an infeasible grade structure. New Standards of Grade (SGA) have been developed which no longer authorize a fixed grade for air crewmembers. Instead, they will be distributed by grade in accordance with the SGA. The duty position title "crew chief" is being called "air crewmember" in harmony with AR 672-5-1 which authorizes the aircraft crewman badge. New MOS specifications have also been developed which reflect proposed changes, including the designation of all technical repair tasks as Skill Level 1 Tasks.

2. SUBFIELD STRUCTURE OF CMF 67.

A. BACKGROUND. The current structure for CMF 67 consists of 17 MOS grouped in two subfields (a subfield is defined as a grouping of the most closely related MOS in the CMF); 671 (Aircraft Maintenance) and 672 (Aircraft Components Repair). See Annex A. These subfields contain nine and eight MOS respectively.

B. DISCUSSION. Proposed structure contains 25 MOS divided into five subfields: 671 (Fixed Wing Airplane Maintenance), 672 (Rotary Wing Aircraft Maintenance), 673 (Aircraft Components Maintenance), 674 (Aircraft Electrical Systems Maintenance), and 675 (Aircraft Armaments Maintenance). See Annex B. Proposed subfield structure distributes MOS more closely along functional lines. Subfield 671 consists of four MOS, two fixed wing repair and two fixed wing technical inspector MOS. For discussion see Sections 3 and 4 below. Subfield 672 consists of 12 repairer and 1 supervisory MOS.

This subfield changes from the current subfield by removal of 67G from it to new subfield 671, the deletion of MOS 67W (Aircraft Quality Control Supervisor) from the structure and the addition of the 66 series MOS which incorporates the quality control supervisor and technical inspector duties. Subfield 673 consists of four repairer and one supervisory MOS. Proposed action terminates MOS 68B (Aircraft Powerplant Repairer), 68D (Aircraft Powertrain Repairer), and 68G Aircraft Structural Repairer) after grade E5. MOS 68F (Aircraft Electrician) is shifted to new subfield 674, and 68H (Aircraft Pneudraulics Repairer), which is a relatively low density MOS, is unchanged; however, it should be considered for elimination. NOTE: Additional data regarding MOS 67Z40 E7 deficiencies are included in Chapter 5, Paragraph 4B.

The distribution for MOS 68H authorizations is such that normally only one Pneudraulics Repairer is authorized per unit other than in AVIM organizations. This results in insufficient supervisory positions, does not provide for development of technical expertise, and does not allow development of a viable career progression pattern. A review of duties and training for MOS 68H and other aircraft repair and aircraft component repair MOS suggests that a comprehensive task analysis could provide a basis for elimination of MOS 68H and transfer of duties. It appears that a portion of the duties would be appropriate to MOS 68B (Aircraft Powerplant Repairer) and 68D (Aircraft Powertrain Repairer) and the remaining duties being applied to the respective Aircraft Repairer MOS (67 series MOS). This procedure requires a more thorough analysis to confirm its validity; however, if appropriate it would appear to provide an operational and cost effective solution to the 68H problem.

MOS 68J (Aircraft Fire Control Systems Repairer) and 68M (Aircraft Weapons Systems Repairer) are moved to subfield 675. Supervisory MOS 68K (Aircraft Components Repair Supervisor) exists at grade E7 only, in the current structure; however, establishment of 68K at E6 is proposed. The low density of E6 authorizations in MOS 68B, 68D, and 68G does not provide adequate first line supervisors. The use of 68K30 will increase the number of supervisors authorized. Spaces for this skill level will come from those 68B, 68D, and 68G E6 positions currently in the structure. Under this proposal, an E6 68K30 will supervise only 3 MOS compared to the 7 currently supervised by the 68K40. Concurrently, the E7 68K40 will be supervising only three MOS at grade E6 - 68K, 68H, and 68F.

Subfield 674 consists of MOS 68F (Aircraft Electrician). In the current structure, MOS 68F is in the aircraft components subfield. This placement is considered erroneous because of the differences in duties between the electrician and other component repairers. This MOS has low density and is usually authorized one per unit except in larger units. This distribution provides neither an adequate number of supervisors nor appropriate career progression opportunity. MOS 68F was considered for merger with 68J; however, they were found to be incompatible. MOS 68F is more compatible with avionice MOS and should be considered for transfer to CMF 28 (Aviation

Communications - Electronics Systems Maintenance). From a progression point of view, there is no cross over from 68B, 68G, or 68H to 68F, nor can 68F be promoted into these MOS. Instead 68F is "stovepiped" through grade E6 where it feeds into 68K40. In proposed subfield 674, this progression will remain the same. The Aircraft Armaments Repair Subfield (675) has been established to accomodate MOS 68J (Aircraft Fire Control Systems) and 68M (Aircraft Weapons Systems Maintenance) because of the lack of compatibility between these MOS and other components repairers. MOS 68J has been extended through grade E7 to ensure that weapons systems expertise remains in the subfield as supervisors. The E7 feeds into 67Z50 (Aircraft Senior Sergeant) at grade E8. MOS 68M will progress only through grade E5 and merge with 68J30 at grade E6. Current 68M30 E6 positions will be converted to 68J30.

C. FINDINGS.

(1) Present subfield and MOS structure of CMF 67 is unsatisfactory and does not provide an effective means of management, training, and utilization of the enlisted maintenance force, also see Chapter 5, Paragraph 4C(6).

(2) The MACRIT for MOS 68H does not allow development of a viable career pattern and does not provide for development of required technical expertise.

D. RECOMMENDATIONS.

(1) Approve proposed subfield structure, also see Chapter 5, Paragraph 4D(3).

(2) Perform an analysis to determine the feasibility of elimination of MOS 68H from the aviation maintenance MOS structure and transfer of functions to other appropriate MOS in CMF 67.

3. FIXED WING MOS: MOS 67G (Utility Cargo Airplane Repairer) and 67H (Observation Airplane Repairer).

A. BACKGROUND. Prior to implementation of the Enlisted Personnel Management System (EPMS) in 1977, two fixed wing airplane maintenance courses were taught at the US Army Transportation School. One of these courses was devoted to the OV-1 (Mohawk) Airplane and the other to remaining Army fixed wing aircraft, primarily the U8 and U21. Graduates of these courses were awarded MOS 67H (OV-1 Airplane Repairer) and MOS 67G (U8/U21 Airplane Repairer) respectively. In 1977, however, these two courses were combined into one course, MOS 67H was deleted from the structure, and MOS 67G was retitled Airplane Repairer.

B. DISCUSSION. Combining the two courses into one has resulted in students remaining at the school for significantly longer periods of time. For example, based on FY 78 projected workload, there was an increased training time of 10,945 student mandays. Following is an analysis of

resident training time. Note that aircraft densities (60% U8/U21 and 40% OV-1) and previous course lengths are used in this computation.

ANALYSIS OF RESIDENT TRAINING TIME

Course	Length (Days)		Projected FY 78 Workload		Mandays
		PRESENT (1 MOS)			
67G	98	X	275	=	26,950
		PROPOSED (2 MOS)			
67G10	65	X	165	=	10,725
67H10	48	X	110	=	5,280
TOTAL (67G10 & 67H10)				=	16,005
DIFFERENCE				=	-10,945

In addition to significant savings in training mandays, the US Army Transportation School estimates that splitting MOS 67G will result in a potential savings of 19 instructors and release two U8 and one OV-1 airplanes from the school.

Other reasons for splitting MOS 67G include the fact that the OV-1 is drastically different both in design and manufacture from the U8/U21, has no systems common to the U8/U21, and the fact they are only colocated in significant numbers in one unit. Because about 60 percent of school graduates are initially assigned to U8/U21 units, they do not use school taught skills associated with the OV-1. Conversely, those personnel assigned to OV-1 units do not use skills associated with U8/U21 airplanes on initial assignments. As unused skills are considered lost after 1 year, it is obvious that teaching both types of airplane maintenance in one course is wasteful.

Maintenance of target aircraft will be conducted by MOS 67H; however, references to operations or recovery tasks associated with target aircraft have been deleted from this MOS. Proposed structure for MOS 67G will progress from skill level 1 through skill level 4 and feed 67Z50 at grade E8. MOS 67H will go from skill level 1 through skill level 3 and feed 67G40 at grade E7 (Annex B).

C. FINDING. Consolidation of all Army fixed wing aircraft repair duties under one MOS is inefficient in terms of training, skill retention, and manpower utilization.

D. RECOMMENDATIONS.

(1) That current MOS 67G (Airplane Repairer) be split into two MOS as discussed above.

(2) That US Army Transportation School revise entry level fixed wing course of instruction.

4. TECHNICAL INSPECTOR (TI) MOS.

A. BACKGROUND. The current MOS structure authorizes grade E6 Technical Inspectors for each aircraft system; however, there is no system for identifying TI requirements nor personnel who have been trained as TI. In reality, every E6 is considered qualified as a TI regardless of background and training.

B. DISCUSSION. The study group determined a need for a separate 66 series MOS, which includes both the TI duties and Quality Control functions of MOS 67W, to identify TI positions and personnel. For example, MOS 66N will be used to identify the Utility Helicopter (UH-1) TI. The exclusive use of grade E6 as TI has been expanded to include grade E5. The SSG assessment concluded that not all SL2 personnel could perform as TI; therefore, to be awarded a 66 series MOS identification, E5 personnel would be required to have 18 months experience at skill level 2 in the aircraft system associated with the TI MOS, be recommended by the unit commander, and have completed an appropriate TI course. Progression would be, for example, from 67N20 (Utility Hel Repairer) to 66N20 (Utility Hel TI) then to 66N30 (Utility Hel TI). From there, progression will be to 67Z40 for rotary wing aircraft TI and to 67G40 for fixed wing TI. Annex B shows this progression. MOS 66U (Medium Helicopter TI) and MOS 66X (Heavy Lift Helicopter TI) will not be authorized at skill level 2 because of helicopter complexity and extensive E5 requirements. The introduction of the TI at grade E5 in the other MOS, will, however, provide longer utilization of trained personnel and add needed expertise to the force as well as establish a system for identification of TI. NOTE: Additional data is contained in Chapter 3, Paragraph 4B(3).

C. FINDINGS.

(1) No means exist to identify trained TI personnel.

(2) No means exist to identify TI requirements.

D. RECOMMENDATIONS.

(1) Establish 66 series MOS for purpose of identifying Aircraft Technical Inspector positions and personnel.

(2) Establish appropriate TI courses at US Army Transportation School.

(3) Consider using the TI concept outlined above for nonaviation MOS authorized excessive positions at grade E6.

5. STANDARDS OF GRADE AUTHORIZATION (SGA).

A. BACKGROUND. AR 611-201 states "Standards of Grade Authorizations authorize grades for representative positions classified by the MOS, and provide guidance for authorizing equitable grades for all positions classified by the MOS in authorization documents." It further states, "Standards of grade authorization do not authorize positions. Instead, they provide the basis for determining equitable grades for positions after the number of positions and the MOS classifications have been established. Standards of grade authorization will be applied to - (1) TOE documents at the level 1 column. (2) Separately to the REQUIRED and AUTHORIZED columns of TDA documents."

B. DISCUSSION. Current SGA for CMF 67 MOS were developed as part of the EPMS process. For various reasons the force produced by these SGA did not achieve the desired objective force. Among the reasons for not achieving a better grade structure is apparent confusion in both the SGA themselves and on application of SGA in the field. Some documents writers appear to be applying it at the lowest organizational level while others do not. A more definitive explanation on proper use of SGA in AR 611-201 could improve field application of SGA. The main problem with current CMF 67 structure is that it is infeasible at grade E5. That is, more positions are authorized at E5 than at E4 and E3. Such condition encourages rapid promotion regardless of experience. The primary reason for the excess authorization at E5 is the fixed grade authorization for most aircraft crew chief positions. New SGA have eliminated this condition by authorizing air crewmember positions for grades E3, E4, and E5 for systems requiring enlisted flying crewmembers, except for the CH-47, and CH-54 which are authorized E4 and E5 air crewmembers. The thrust of these new SGA is to increase authorizations at grades E3 and E4, and decrease them at E5, E6, and E7. Attempts have been made to improve the supervisory structure throughout. Appendix B reflects grade distribution of current and proposed force after new SGA have been applied. Revised SGA are included with MOS specifications at Appendix D. Appendix C reflects current and proposed grade distribution for different type TOE. Appendix E reflects current and proposed grade distribution by unit. NOTE: Additional data is contained in Chapter 3, Paragraph 3B(3).

C. FINDING. That current SGA did not produce a feasible grade structure and revision is required.

D. RECOMMENDATIONS.

(1) That proposed SGA be approved.

(2) That proponents of DA Staffing Guides revise their guidance to require use of SGA for determining grade distribution.

(3) That AR 611-201 provide more detailed guidance on use of SGA.

6. NEW MOS SPECIFICATIONS.

A. BACKGROUND. MOS specifications contain information required for classification of positions and personnel. They describe the more significant duties and tasks performed in representative positions comprising the MOS.

B. DISCUSSION. Current MOS specifications were written during the EPMS process and because of proposed changes in structure, they again require rewriting to include those changes. MOS 67G (Airplane Repairer) has been rewritten to include a new title (Utility Cargo Airplane Repairer) and to restrict its duties and tasks to utility/cargo airplane repair. MOS 67H (Observation Airplane Repairer) came out of MOS 67G and deals with the only other fixed wing class in the Army inventory. All 67 series MOS associated with aircraft systems have been rewritten to delete duties and tasks of technical inspectors. Duties of these technical inspectors have been included in appropriate 66 series MOS. MOS 68B (Aircraft Powerplant Repairer), 68D (Aircraft Powertrain Repairer), and 68G (Aircraft Structural Repairer) have been rewritten to delete grade E6 duties and tasks. The duties of these E6 will be performed at skill level 3 by MOS 68K30 (Aircraft Components Repair Supervisor). Duties of MOS 68H (Aircraft Pneudraulics Repairer) and 68F (Aircraft Electrician remain unchanged and have been rewritten merely to reflect new format. MOS 68J (Aircraft Fire Control Repairer) has been rewritten to extend through grade E7 and 68M (Aircraft Weapon System Repairer) has been rewritten to terminate at grade E5 and feed 68J30 at grade E6. In MOS specifications authorized enlisted flying crewmembers, the reference to "crew chief" has been replaced by "air crewmember." This action was taken to be more closely in harmony with AR 672-5-1 which authorizes aircraft crewman badges. All repairer MOS reflect that all technical skills are Skill Level 1 tasks and that Skill Level 2 has more experience and performs these same tasks while offering technical guidance to lower grade personnel. Proposed MOS specifications are at Appendix D.

C. FINDING. Proposed MOS restructuring action requires new MOS specifications.

D. RECOMMENDATION. Approve proposed MOS specifications.

7. CURRENT INVENTORY IMPACTS.

A. BACKGROUND. In order to achieve a feasible grade structure for CMF 67, it is necessary to decrease the number of positions at grades E5, E6, and E7 and increase the number at E3 and E4.

B. DISCUSSION. Appendix B shows that the proposed force does have more E3 and E4 positions and fewer at E5, E6, and E7 than does the current force. There are also a few more E8 and E9 positions in the proposed force than in the current. The changes at grades E7 and below were necessary to achieve a feasible force structure, that is, a force in which the lower grades provide sufficient numbers to replace losses in higher grades. Appendix B also reflects current force grade authorizations, proposed force, and ME June 1979 operating strength. As shown, adjustments to the personnel inventory to achieve proposed structure will require:

E3	E4	E5	E6	E7	E8	E9
+133	+632	-976	-475	-281	+24	+2

It is realized that the inventory cannot reflect proposed structure on implementation date; however, it should be achieved as soon as possible. There is no intention to achieve this structure through reduction in grade of any soldier currently in affected grades. Rather, the adjustments are to be made by attrition and reclassification action on a schedule to be established by MILPERCEN. At the same time, provisions must be made to continue promotions in affected MOS. It is believed, however, that because of the lead time between publication and implementation of proposal, adjustments can fairly easily be made in grades E3-E5. It is assumed that grades E6 and E7 adjustments will take longer to achieve.

C. FINDING. Proposed MOS restructuring action will have significant impact on CMF 67 current inventory.

D. RECOMMENDATION. That MILPERCEN provide appropriate adjustment instructions to achieve personnel grade distribution to match proposed structure.

8. SUBSTITUTABILITY BETWEEN MOS.

A. BACKGROUND. Career Management Field Chart for CMF 67 indicates that MOS 67N (Utility Helicopter Repairer), 67V (Observation/Scout Helicopter Repairer), and 67Y (Attack Helicopter Repairer) are substitutable at comparable levels of skill as are 68J (Aircraft Fire Control Systems Repairer) and 68M (Aircraft Weapons Systems Repairers).

B. DISCUSSION. AR 611-201 defines substitutability as "an indication of the MOS that is sufficiently related occupationally to another MOS to permit personnel substitution between them. Related MOS are neither completely nor equally interchangeable. A person may require 1 to 6 months on-the-job training to become fully qualified in a substitute MOS. Length of on-the-job training will depend on the scope and complexity of the MOS and the ability, motivation, and background of the individual." In the field; however, the statement on the CMF 67 chart is being interpreted literally and personnel are being assigned by MILPERCEN in accordance with this rule. In reality, personnel in MOS 67N, 67V, and 67Y are receiving

limited institutional training in their primary MOS at SL1 and none in the other two MOS. Unit commanders are expected to ensure that new arrivals from the training base receive adequate training to qualify in their primary MOS. This system of requiring units to finish qualifying soldiers in their primary MOS already places a burden on them. Requiring units to accept personnel with a different MOS only increases the burden and reduces operational capability of units concerned.

Compatibility of systems on the three helicopters concerned does not support substitutability between repairers. The chart also indicates that MOS 68J (Helicopter Missile Systems Repairer) and MOS 68M (Helicopter Weapons System Repairer) are substitutable at comparable levels of skill. This is only acceptable until Change 13, AR 611-201 is implemented. Change 13 will place all electronics tasks in MOS 68J and all mechanical tasks in 68M. Training is being changed to reflect this realignment of duties. Because of the impact of Change 13 on these MOS, the substitutability rules will no longer be valid.

C. FINDING. Substitutability rules for CMF 67 are not compatible with duties, training, and field conditions for MOS indicated.

D. RECOMMENDATION. Substitution rules pertaining to substitution at comparable skill levels of MOS 67N, 67V, and 67Y be changed to "None."

9. ELIMINATION OF MOS 67W (AIRCRAFT QUALITY CONTROL SUPERVISOR) FROM MOS STRUCTURE.

A. BACKGROUND. This MOS was established during the EPMS process by combining MOS 67F, Airplane Technical Inspector, and 67W, Helicopter Technical Inspector.

B. DISCUSSION. The Quality Control (QC) Supervisor function under the EPMS concept was to supervise quality control programs applying equally to fixed and rotary wing aircraft. Among other tasks, AR 611-201 says Quality Control Supervisors will check aircraft records and advise technical inspectors on maintenance practices, procedures, and techniques. It also states they will establish and maintain technical data and publications files and check maintenance and supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS). The structure that developed from the EPMS process, however, established relatively few Quality Control Supervisory positions. Instead, 38 percent of 67W positions are identified as technical inspectors. Training for MOS 67W was terminated at the end of FY 78. In addition, the previous training program was incompatible with the MOS structure and duty position technical requirements. The study further determined that TI and QC duties were compatible.

C. FINDING. The quality control function is primarily a duty of the aircraft maintenance technical inspector. Therefore, a separate MOS for this function is unnecessary.

D. RECOMMENDATION. Delete MOS 67W from MOS structure with incorporation of appropriate quality control tasks in 66 series MOS.

10. UTILIZATION OF FEMALE SOLDIERS.

A. BACKGROUND. In 1978, AR 611-201 announced that "Women are authorized to serve in any enlisted specialty and at any organizational level, and in any units in the Army except in Infantry, Armor, Cannon Field Artillery, Combat Engineer, and Low Altitude Air Defense Artillery units of battalion/squadron or smaller size." This exclussion has been further interpreted as being applicable to Attack Helicopter and Air Cavalry organizations of battalion/squadron or smaller size. A list of the 29 closed MOS and one SQI is attached at Annex D.

B. DISCUSSION. The wide scale opening of MOS to women was in response to DOD guidance requiring increasing use of women in the armed forces. Women can, with the exception of some heavy lifting requirements, be effectively utilized in aircraft or component repair. However, inconsistencies in policy on utilization of women in aviation MOS appear to exist. Women are precluded from assignment to nonflying related MOS such as cook, clerk, or aircraft powerplant repairer in attack helicopter and armored cavalry units at battalion level and below. Yet, this same policy permits assignment of women to Combat Support Aviation and Assault Support Helicopter Companies in any capacity, including crew chief/door gunner. This problem is inherent with the air crewmember's duty to perform as a door gunner on aircraft missions, which may result in direct contact with hostile forces. The apparent intent of the exclusions quoted above is to prohibit women from direct combat assignments. Their use as air crewmembers/door gunners in a combat environment appears contradictory to the intent. This inconsistency causes no major problems if the intent is to employ women as air crewmembers/door gunners during combat and if this intent is viable. However, significant training and mobilization problems will occur if this is not a realistic wartime policy. If it is not viable, it would be necessary to replace female crew chiefs with males in UH-1, UH-60, and CH-47 units (excluding Air Ambulance). It appears that the employment of women as helicopter air crewmembers/door gunners is contrary to the intent but not the specific limitations of AR 611-201. The important issue in this case regards the need for compatibility of peacetime organization/training and wartime employment. Another apparent inconsistency involves training policy as it pertains to MOS 68J (Aircraft Fire Control Repairer) and 68M (Aircraft Weapons Systems Repairer). ARPRINT data indicates that women are to be excluded from training in 68M but included in 68J. With realignment of 68J/68M duties announced in Change 13, AR 611-201, this training policy appears inappropriate.

C. FINDING. Policy on use of women in aviation units is inconsistent with that contained in Chapter 4, AR 611-201 (Annex D).

D. RECOMMENDATIONS.

(1) Establish a consistent and viable policy on use of women in aviation related MOS and units.

(2) Ensure that annual female training requirements are commensurate with force structure requirements.

11. THE ENLISTED PROMOTION SYSTEM.

A. BACKGROUND. The Army enlisted personnel promotion system is comprised of three subsystems. These are the Decentralized which is used to promote to grades E3 and E4 at unit level, the Semi-Centralized used to promote to E5 and E6 at local command level, and the Centralized used to promote to E7, E8, and E9 at Department of the Army. The promotion system is designed to fill authorized enlisted spaces with soldiers who have demonstrated potential for increased responsibility, to provide career progression, and to preclude promotion of soldiers who are nonproductive or who lack potential to perform in higher grades.

B. DISCUSSION. (1) CMF 67 PROMOTIONS. Promotions are made in CMF 67 as outlined above to fill TOE and TDA positions, which at the aggregate level, comprise the Army's enlisted aviation maintenance structure. This structure emerged from the EPMS reconfiguration process with an infeasible grade structure, particularly at grades E3, E4, and E5. That is, there were more E4 positions authorized than E3 and more E5 positions authorized than E4 (see Chapter 3 for discussion of grade feasibility). Table 3-1 depicts CMF 67 structure as it existed in TAADS in May 1979. As is obvious from this table, promotions to both E4 and E5 can be made rapidly. This is true because of the promotion opportunity created by the current CMF 67 structure. A comparison of promotion opportunity between current and proposed structures and EPMS goals follows:

Grades	E4	E5	E6	E7	E8	E9
Current CMF Average	100%	100%	64.2%	76.4%	41.5%	36.4%
Proposed CMF Average	96.8%	95.3%	74.7%	75.4%	52.3%	44.7%
EPMS Goals	83-99%	81-99%	72-92%	56-99%	27-77%	26-76%

This data clearly shows that the current CMF 67 structure exceeds EPMS promotion opportunity goals at E4 and E5 while falling short at grade E6. The result of the current structure is that E3 and E4 personnel are promoted as quickly as they become eligible or can be made eligible with waivers. Such accelerated promotion does not permit the acquisition of Skill Level 1 experience before promotion to E5, Skill Level 2. The overall impact of rapid promotions is that the experience level of the Army's aircraft maintenance force is declining (See discussion of Aviation Maintenance Mishap Errors in Chapter 6). It is also obvious from Table 3-2 that once

grade E5 is achieved, promotion flow slows considerably. Following is a comparison of Army-wide/CMF 67 promotion allocation data to E5/E6 for FY 79:

PROMOTION ZONE	TO GRADE E5		TO GRADE E6	
	ARMY LESS CMF 67	CMF 67	ARMY LESS CMF 67	CMF 67
Primary Zone	27,429	801	11,152	725
Secondary Zone	14,905	996	7,399	47
Secondary Zone Percent	35.2%	55.4%	39.9%	6.0%

This data indicates that over 50% of E5 allocations in CMF 67 went to personnel with less than three years time in service (TIS) compared to 35% for the rest of the Army. At grade E6, CMF 67 had very limited opportunity for promotion from the secondary zone since 94% of E6 allocations in the CMF went to personnel with seven or more years TIS (primary zone). This is in contrast to Army-wide data (less CMF 67) indicating that 40% of its allocation went to personnel in the secondary zone with 5 to 7 years TIS. A comparison of Army-wide and CMF 67 TIS for personnel promoted to E5 and E6 during FY 78 and the first half of FY 79 follows:

GRADE	CMF 67 TIME IN SERVICE		ARMY-WIDE* TIME IN SERIVCE
	MEDIAN	AVERAGE	AVERAGE
E5	2.8 years	3.3 years	3.58 years
E6	9.1 years	9.5 years	8.10 years

*Includes only FY 78 data

Both promotion allocation and actual promotion data indicate that CMF 67 personnel are being promoted to grade E5 with less TIS than personnel in other CMF and that promotion to E6 in CMF 67 takes significantly more TIS. This results in CMF 67 personnel having approximately 12 percent more total time in service (TIS) upon making E6 and 40 percent more time in grade (TIG) as an E5 than the Army wide average. For CMF 67 personnel this generally means promotion to E5 during the first enlistment with prospects at reenlistment time of extended stagnation at E5 while waiting for promotion to E6. In view of CMF 67 reenlistment data, the extended TIG at E5 and TIS while waiting for E6 appears to be more of a negative influence on reenlistment than expeditious promotion to E5 being a positive factor. Conversely, the opportunity for rapid promotion to E5 serves as an incentive to personnel in other CMF to reenlist for aviation maintenance. Another significant promotion problem in CMF 67 concerns opportunity for promotion. As noted in Tables 3-2 and 3-4, there is poor promotion opportunity to grade E6 for the CMF and many MOS have equally limited promotion opportunity to grades E5 and E7. Generally the 67 series MOS, as a result of structural authorizations have 2 to 3 times more opportunity for promotion to E5, E6, E7 and E8 than the 68 series MOS. The proposed authorizations results in a

grade sustainable structure for each MOS with a generally improved promotion opportunity to E6, E7, E8, and E9. Average TIG to E6 and average TIS to E6, E7, E8 and E9 will be reduced with the proposed structure.

(2) SEMI-CENTRALIZED PROMOTIONS. To qualify for promotion to E5 and E6 under the Semi-Centralized promotion system, soldiers must meet certain promotion criteria, be recommended by their commander or supervisor, and attain recommended list status in either the Primary or Secondary Zones. Promotion List status is achieved through a combination of administrative points and points achieved during appearance before field promotion boards. Soldiers must maintain promotion list standing for at least three months prior to being eligible for promotion. They are promoted during the fourth month if their promotion point scores are equal or higher than the monthly MOS cutoff score. Notwithstanding the efforts of the personnel community to increase awareness of the Semi-Centralized system, there remains a significant degree of misunderstanding and dissatisfaction among commanders, senior NCOs, and eligible E4s and E5s. Concern is expressed primarily over perceived inequities, inability of commanders to promote personnel they feel deserving, and an inability to effect career planning or provide advice regarding estimated time of promotion.

These concerns are frequently answered in the vein of an official cited in a 10 September 1979 Army Times article on the subject ".... most soldiers accept the system because they know that if they obtain a certain score on the 1000-point work sheet that they'll be promoted." and "They don't want their promotions based on politics or favoritism - a charge many soldiers made of the old E5 and E6 promotion system." The first statement is erroneous and only contributes to a lack of understanding of the system. Other than obtaining a promotion score in excess of 800 for E5 and 885 for E6, there is no means by which an individual can correlate his score with prior month cutoff scores and estimate his promotion probability. This is an inherent aspect of the cutoff score determination process and is substantiated by monthly cutoff scores. The primary zone cutoff scores for E5 and E6 during the months of July, August, and September 1979 indicate that 36% of E5 and 37% of E6 scores changed during the period with point changes ranging from 450-801 for E5 and 550 to 886 for E6.

The process of determining cutoff scores is based upon vacancy determination using the difference between the projected strength for a grade (last known strength, estimated losses, reductions, and promotions) and the budgetary limitations for that grade. Vacancies are allocated to MOS by comparing the allowable percentage of fill for that grade under budgetary limits with the projected percent of fill in each MOS at that grade. Available allocations are made to the MOS with first priority going to those with the lowest percentage of fill. Cutoff scores are then established for each MOS which provides a means of translating MOS allocations into the requisite number of promotions to the personnel with the highest MOS promotion points. This procedure is repeated monthly for both E5 and E6. This system provides no means of assessing individual

promotion probability once recommended list status is attained. It does result in the best qualified personnel being promoted (those with the highest promotion score) but it can be a serious detriment to morale in many MOS. If officer or senior enlisted promotion systems operated in this manner, it would essentially mean that the recommended list would reflect those fully qualified personnel, to which additions were made monthly as they came into the zone of consideration, and from which promotions were made, based upon the highest promotion score.

The system lacks promotion visibility or career planning characteristics especially in MOS with promotion bottlenecks or limited authorizations such as CMF 67 at grade E6. As an example, based upon end FY 79 recommended lists and total FY 79 promotion allocations to E5 and E6, if no additions were made to the recommended lists and if promotions continue at the FY 79 rate, it would take the following period for list exhaustion:

CMF 67 E5/E6 RECOMMENDED LIST EXHAUSTION

MOS	TO GRADE E6 PERIOD YEARS	TO GRADE E5 PERIOD YEARS
67G	3.2	0
67N	2.5	0
67U	.4	.9
67V	.6	0
67Y	1.8	0
67W	.1	N/A
68B	9.4	65.0
68D	58.0	62.0
68F	15.3	2.3
68G	1.1	.3
68H	2.5	1.7
68J	.5	1.4
68M	3.9	0

Obviously with recommended list additions occurring monthly and with few promotion allocations, promotion probability to E6 is not a significant incentive to retention in most aviation maintenance MOS.

Another Semi-Centralized promotion system problem relates to the method of establishing MOS promotion allocations. Basing allocations upon a comparison of budgetary authorizations with MOS percent of fill actually encourages overstructuring an MOS at E5 and E6 and discourages establishment of a grade sustainable structure. An MOS with a large portion of its authorizations at E5 and E6 contributes to the differential between structured grade authorizations and budgetary limitations; however, by virtue of being unsustainable at one or both of these grades it will have a low level of fill which means it will receive a greater percentage of total promotion allocations to that grade. Conversely, an MOS properly sructured will tend to have a higher fill level than the budgetary limited percentage

of fill for that grade and will receive no or limited allocations. CMF 67 authorizations at grade E5 characterize both sides of this issue. The 67 series MOS being significantly overstructured at E5 (45% of 67N authorizations are at grade E5) have a low level of fill (73% at E5 for 67N) and consequently receives maximum allocations. The 67N primary zone (PZ) and secondary zone (SZ) promotion list to E5 was exhausted at the end of FY 79 and for 8 of the 12 months during the year. On the other hand, the 68 series MOS tend to be understructured at E5 and E6 (14% of 68D authorizations are at E5) with a high level of fill (145% at E5 for 68D). Consequently 68D received only one allocation to E5 during FY 79 and had 62 personnel on the recommended list at the end of the FY.

Questions are also raised regarding significant downward fluctuations in the number of personnel on the recommended list. Questionable are those which occur during periods of no or limited promotions and which are greater than can be explained by separations. It appears that promotions other than those programmed by the monthly allocation system are not uncommon.

Contrary to the Army Times comment cited above, resolution of these problems does not mean establishing a system "based on politics or favoritism." They can be addressed by fine tuning the current system. The first step should be to develop MOS structures which are grade sustainable (Chapter 3, Section 2). If the MOS grade structure cannot be sustained, requirements will be artifically attained through accelerated promotions without regard for skill achievement. In absence of sustainable or feasible MOS grade structures, a means of decrementing promotion allocations to unsustainable MOS is required. Secondly, the semi-centralized promotion system can achieve increased efficiency, equity, and visibility by:

(a) Changing field promotion selection boards from monthly to semiannually for E5 and annually for E6.

(b) Establish provisions for inclusion of individual promotion point scores as a SIDPERS entry which can enhance current tabulation and cutoff score procedures.

(c) Change DA procedures regarding promotion allocations to reflect semiannual (E5) and annual (E6) vacancies.

(d) Announce MOS recommended list based on paragraph (c) above with promotion list standing predicated upon promotion point score.

(e) Announce monthly promotions from the recommended list by MOS cutoff scores.

(f) Personnel failing to attain recommended list standing because of promotion point score being below the cutoff score, can be given the option of attaining recommended list standing during the next period by either

reappearing before a field board or by an administrative recomputation of their promotion point score.

It appears essential that procedures for promotion to E5 and E6 fully recognize the valuable resource represented by experienced, technically qualified E4 and E5 personnel and include provisions comparable to officer and senior enlisted promotion systems which enhance promotion visibility and career progression assessment. Recommended procedures can provide a highly visible system which allows personnel to assess their promotion probability while continuing to promote soldiers who are highly qualified and have demonstrated potential for increased responsibility.

C. FINDINGS.

(1) Rapid promotion to E5 without regard to skill achievement results in an Army aviation maintenance force with less than required skills and experience.

(2) Promotion problems for E5 and E6 in CMF 67 are a direct result of current structure deficiencies.

(3) Rapid promotion of aviation maintenance personnel to E5 does not result in satisfactory retention of first term personnel.

(4) The Semi-Centralized promotion system MOS allocation process favors MOS which lack grade sustainability or feasibility.

(5) The Semi-Centralized promotion system is generally an effective and equitable system. However, certain inherent features are detrimental to job and career satisfaction.

D. RECOMMENDATIONS.

(1) Approve proposed structure.

(2) Revise the Semi-Centralized promotion system to provide a more objective and visible means of selecting qualified personnel for promotion to grades E5 and E6.

12. CMF 67 RETENTION AND INCENTIVES TO RETENTION.

A. BACKGROUND. The objective enlisted force is predicated on a feasible and acceptable balance between retention of trained soldiers and acquisition of nonprior service accessions. Achievement of an enlisted force which meets force structure requirements and is balanced in terms of grade, skill, and year group considerations requires first term and career reenlistment rates of 37-39 and 68-70 percent of eligibles respectively. In other words, considering current first enlistment attrition rates, we need

to reenlist 21-23 of every 100 new accessions at the completion of their first enlistment.

Inducements for enlistment and reenlistment are provided in the form of monetary incentives under Public Law 93-277 which gives the Army authority to offer bonuses in skills characterized by quantity and quality shortfalls. These are available in the form of Enlistment Bonus (EB), Selective Reenlistment Bonus (SRB), and Special Duty Assignment Proficiency Pay (SDAPP). Payments of up to $3000 are authorized as EB to personnel enlisting in critical skills which have experienced quantitative and qualitative accession shortfalls. Payments of up to $12000 are authorized as SRB in those MOS experiencing significant shortfalls in the fourth through tenth years of service. The SRB Program is divided into two zones. Zone A is from 21 months to six years of service and Zone B is from six to 10 years of service. Reenlistees must be MOS qualified in an MOS designated for award of an SRB, be grade E3 or higher, and meet appropriate zone requirements. The requirement for SRB's is evaluated in terms of retention shortfalls. Inherent in this evaluation is the extent of the shortfall, the quality content of the MOS, the importance of the MOS to accomplishment of the Army's mission, the training time, and training cost. SRB of 1A is currently authorized for MOS 67N, 67U, 67V, 67Y, 68G, and 68J. SDAPP is the only proficiency pay program in effect and is designed to attract volunteers to serve as recruiters, drill sergeants, and career counselors.

B. DISCUSSION. Enlistment rates for aviation maintenance MOS have been adequate to meet force structure requirements. However, the perceptions of potential accessions which provide for sufficient initial enlistments in CMF 67, do not prevail throughout the first enlistment as evidenced by the net reenlistment rates of first term aviation maintenance personnel. Net reenlistment refers to the reenlistment rate among ETS eligible personnel who reenlist in their current MOS. On the other hand, gross reenlistment rates for an MOS reflect the reenlistment rate for ETS eligible personnel holding that MOS, without regard to the MOS for which they reenlist. The difference is that net rates reflect the percentage of MOS qualified personnel being retained in an MOS while gross rates reflect the percentage being retained in the Army. Furthermore, the quantitative difference between the two rates represents a loss of technical skill and experience to the MOS, an additional training requirement (MOS qualification) in a different MOS, and a MOS skill level-grade mismatch if the reenlistee is a senior E4 or E5. While reenlistment of qualified personnel, regardless of reenlistment MOS, is generally more desirable than new accessions, first priority in reenlistment should be toward reenlisting personnel in their current MOS. This avoids the skill/experience loss to an MOS, the retraining costs in a new MOS and the skill level-grade disparities. These same considerations should apply in determining the need for an SRB in a MOS. Net reenlistment rates and qualitative inventory analysis techniques should be used. These techniques are required because quantitative analysis can portray an MOS as meeting grade and year cell requirements while significant qualitative grade and year cell deficiences exist as a result of

significant renlistment migration into the MOS. These deficiencies occur when, upon termination of first enlistment, non-CMF 67 personnel reenlist for an aviation maintenance MOS. They then normally attend the AIT course of instruction for their new MOS which provides only partial Skill Level 1 qualification. Consequently, when they report to their new organization as a senior E4, an E5, or E6; significant disparity exists between expected and actual technical capabilities of personnel with their grade and YOS.

Reenlistment rates for first term and career aviation maintenance personnel are shown in Tables 4-1, 4-2 and 4-3. These data indicate:

(1) <u>FIRST TERM REENLISTMENTS</u> (Table 4-1 and 4-2):

(a) CMF 67 personnel are reenlisting in the Army and in current MOS at rates less than Army-wide.

(b) Migration out of CMF 67 (Column f-c) is 3.1% less than Army-wide.

(c) Migration out of 68 series MOS is 2.1% greater than 67 series MOS and is significant in MOS 68B, 68D, and 68M.

(d) Migration into CMF 67 is significant. Of all first term personnel reenlisting for aviation maintenance MOS, 41.6 percent in FY 78 and 53.8 percent during FY 79 came from other specialties.

(e) Migration into MOS 67U, 67V, 68G, and 68H in FY 78 and MOS 67N, 67V, 68D, 68F, 68H, and 68J during FY 79 was greater than retention of qualified personnel.

(f) Only MOS 67G has satisfactory first term retention characteristics. Net reenlistment rates in MOS 67U, 68B, 68D, and 68H are especially low.

FY 78 CMF 67 FIRST TERM REENLISTMENTS
ETS ELIGIBLE PERSONNEL WITH 3 AND 4 YOS

MOS	a ETS Eligible	b Reenlist In Current MOS	c Net Reenlistment Rate (b/a)%	d Reenlist Out Of MOS	e Total Reenlist (b+d)	f Gross Reenlistment Rate (e/a)%	g Reenlist From Different MOS	h Migration Rate Into MOS (g/a)%
67G	122	48	39.3	4	52	42.6	24	19.7
67N**	1210	277	22.9	28	305	25.2	209	17.3
67U**	342	52	15.2	7	59	17.3	57	16.7
67V**	363	89	24.5	7	96	26.4	105	28.9
67X*	31	2	6.5	2	4	12.9	1	3.2
67Y**	367	80	21.8	7	87	23.7	21	5.7
67 Series	2435	548	22.5	55	603	24.8	417	17.1
68B	178	15	8.4	10	25	14.0	10	5.6
68D	134	26	19.4	15	41	30.6	4	3.0
68F	80	26	32.5	0	26	32.5	20	25.0
68G**	200	48	24.0	1	49	24.5	56	28.0
68H	46	8	17.4	0	8	17.4	10	21.7
68J**	96	32	33.3	3	35	36.5	18	18.8
68M	239	50	20.9	14	64	26.8	1	0.4
68 Series	973	205	21.1	43	248	25.5	119	12.2
CMF Total	3408	753	22.1%	98	851	25.0%	536	15.7%
Army Wide				25.2%			31.3%	

*MOS to be Reserve Component only
**MOS currently SRB 1A

TABLE 4-1

CMF 67 FIRST TERM REENLISTMENTS

ETS ELIGIBLE PERSONNEL WITH 3 AND 4 YOS

	FY 78			FY 79		
MOS	TOTAL REENLIST IN CMF 67	REENLIST IN CURRENT MOS	REENLIST FROM DIFFERENT MOS	TOTAL REENLIST IN CMF 67	REENLIST IN CURRENT MOS	REENLIST FROM DIFFERENT MOS
67G	72	48 (66.7%)	24 (33.3%)	31	17 (54.8%)	14 (45.2%)
67N	486	277 (57.0%)	209 (43.0%)	370	132 (35.7%)	238 (64.3%)
67U	109	52 (47.7%)	57 (52.3%)	159	81 (50.9%)	78 (49.1%)
67V	194	89 (45.9%)	105 (54.1%)	235	117 (49.8%)	118 (50.2%)
67X	3	2 (66.7%)	1 (33.3%)	0	0 (0)	0 (0)
67Y	101	80 (79.2%)	21 (20.8%)	185	104 (56.2%)	81 (43.8%)
67 Series	965	548 (56.8%)	417 (43.2%)	980	451 (46.0%)	529 (54.0%)
68B	25	15 (60.0%)	10 (40.0%)	21	15 (71.4%)	6 (28.6%)
68D	30	26 (86.7%)	4 (13.3%)	46	23 (50.0%)	23 (50.0%)
68F	46	26 (56.5%)	20 (43.5%)	36	10 (27.8%)	26 (72.2%)
68G	104	48 (46.2%)	56 (53.8%)	111	61 (55.0%)	50 (45.0%)
68H	18	8 (44.4%)	10 (55.6%)	31	8 (25.8%)	23 (74.2%)
68J	50	32 (64.0%)	18 (36.0%)	38	12 (31.6%)	26 (68.4%)
68M	51	50 (98.0%)	1 (2.0%)	50	27 (54.0%)	23 (46.0%)
68 Series	324	205 (63.3%)	119 (36.7%)	333	156 (46.8%)	177 (53.2%)
CMF TOTAL	1289	753 (58.4%)	536 (41.6%)	1313	607 (46.2%)	706 (53.8%)

PERCENT CHANGE FROM FY 78 TO FY 79

	TOTAL CMF	67 SERIES	68 SERIES
REENLISTMENTS	+1.9%	+1.6%	+2.8%
IN CURRENT MOS	-19.4%	-17.7%	-23.9%
FROM DIFFERENT MOS	+31.7%	+26.9%	+48.7%

TABLE 4-2

CMF 67
SEPARATION ELIGIBLE
REENLISTMENT RATE - FY 78
(6-14 Years Of Service)

MOS	SEP-ELIG FY 78	RE-UP FY 78	RATE %
67G	79	52	65.8
67N	487	333	68.4
67U	164	129	78.7
67V	128	81	63.3
67W	78	65	83.3
67X*	25	11	44.0
67Y	110	74	67.3
67Z	29	27	93.1
67 Series	1100	772	70.2
68B	56	38	67.9
68D	27	20	74.1
68F	30	19	63.3
68G	68	50	73.5
68H	16	6	37.5
68J	41	32	78.0
68K	4	3	75.0
68M	53	30	56.6
68 Series	295	198	67.1
CMF Total	1395	970	69.5
Army Wide (Less CMF 67)			72.3

*MOS to be Reserve Component Only

Table 4-3

(2) CAREER REENLISTMENTS (Table 4-3):

(a) CMF 67 career (6-14 YOS) reenlistment rates are 2.8% less than Army Wide. Other data indicates that FY 76 and FY 77 rates were 4.9% and 6.7% less than Army Wide.

(b) 68 Series MOS reenlistment is 5.2% less than Army Wide - difference is significant in MOS 68F, 68H, and 68M.

(c) Other data indicates that careerist migration out of CMF 67 is not significant.

Review of other data indicates that CMF 67 attrition during first enlistment is less than Army Wide rates. This same data indicates that attrition probability upon completion of first enlistment (ETS without reenlistment) is significantly greater for CMF 67 than Army Wide - 6.7% more probable at

grade E4 and 13.8% more probable at grade E5. Collectively these data vary only slightly from expectations derived from assessment of other CMF 67 personnel management, force structuring, and training considerations. As an example, the relatively high net first term reenlistment rate for 67G is viewed as a product of perceived high job satisfaction, reasonable assignment stability, little probability for malassignment, good working conditions, and good promotion opportunity. On the other hand the relatively low net first term reenlistment rate for MOS 67U (15.2%) could be anticipated as a result of very limited E4 and E5 authorizations (See Table 3-4) and because of nonapplicability of crewmember flight pay for positions below grade E6.

Contrary to initial perceptions, the preponderance of CMF 67 personnel who reenlist, upon completion of their first enlistment do so for their current MOS. On the other hand, retention of aviation maintenance personnel beyond their first enlistment is inadequate to meet force structure requirements. Compensation for potential shortfalls, resulting from the failure to retain sufficient CMF 67 personnel, is being achieved through the reenlistment of significant numbers of personnel into CMF 67 MOS from other occupational specialties. This in turn means a loss of skill and experience in the MOS from which personnel are migrating, a significant retraining requirement for these personnel, and a very significant loss of skill and experience in the form of CMF 67 personnel who do not reenlist. The need for additional monetary incentives to retention in CMF 67 is obscured by the current methodology for assessing SRB need and by the significant migration of first term reenlistees into CMF 67. Figure 4-1 graphically reflects how year cell 4 requirements are being sustained. Under current procedures for determining the need for SRB, only quantitative factors are considered. Consequently, an MOS which met its year cell requirements entirely through reenlistment of personnel from other MOS would be depicted as having satisfactory retention characteristics and no need for an SRB. This procedure, which has no one reenlisting in their current MOS, totally ignores that the personnel being retained are in year cell 4 or 5 in terms of TIS but only year cell 1 in terms of aviation maintenance MOS experience. With AIT providing training on only 31 percent of CMF 67 Skill Level 1-3 critical tasks, there is a significant disparity between actual skill and that represented by their TIS and grade.

The need in this case is not to preclude personnel from other MOS from reenlisting in CMF 67 but rather to address why first term CMF 67 personnel are not reenlisting in adequate numbers and to take appropriate corrective action. Many of the reasons for non-reenlistment, such as job satisfaction, advanced training opportunity, promotion opportunity, assignment stability, and family considerations; cannot be addressed under monetary incentives. However, it appears clear that monetary incentives to first term reenlistment in CMF 67 have not been sufficient to meet requirements. It also appears that current procedures have not been cost effective in terms f CMF 67 strength maintenance.

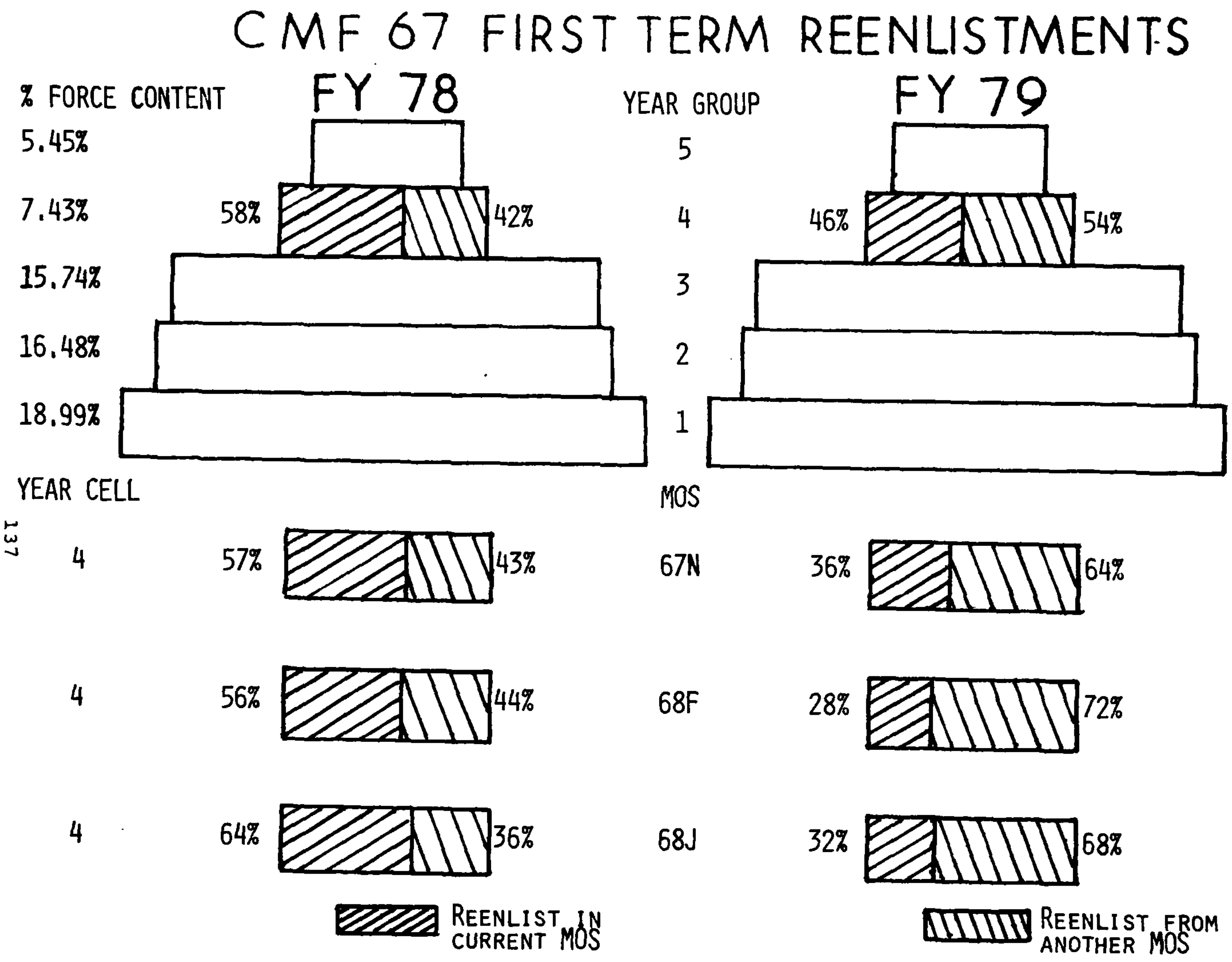

CMF 67 FIRST TERM REENLISTMENTS
% FORCE CONTENT
FY 78
YEAR GROUP
FY 79
5.45%
5
7.43%
58%
42%
4
46%
54%
15.74%
3
16.48%
2
18.99%
1
YEAR CELL
MOS
4
57%
43%
67N
36%
64%
4
56%
44%
68F
28%
72%
4
64%
36%
68J
32%
68%
REENLIST IN CURRENT MOS
REENLIST FROM ANOTHER MOS

FIGURE 4-1

Comparative cost analysis (Annex F) of manpower attainment options, indicate that it would have been considerably less expensive and much more cost effective in term of the skill and experience of the retained force, if an SRB of 2A had been paid to all personnel reenlisting in CMF 67 during FY 78. This same data also indicates that both the marginal cost of obtaining one additional manyear of aviation maintenance skill and the average cost of meeting FY 78 first term retention requirements would have been less and more cost effective if requirements had been meet through the use of increased SRB.

COST COMPARISON SUMMARY

COST	OPTION 1 (FY 78 Program)	OPTION 2 (Increased SRB)	OPTION 3 (FY 78 Program and New Accessions)
TOTAL COST	\$24,415,436	\$21,157,500	\$25,735,192
AVERAGE COST	\$18,941	\$16,414	\$19,965
MARGINAL COST	\$26,813	1A- \$14,772 2A- \$20,942 3A- \$27,112	\$29,274

Aggregate cost data for FY 78 first term reenlistments in CMF 67 indicates that it would have been more cost effective to have paid an SRB of 2A to all personnel reenlisting for their current MOS in CMF 67 than have pursued other forms of retention/accession. This data ignores the significant increase in technical skill base which results from retention of qualified personnel (Option 2) as well as the costs associated with accessing and training replacements for those personnel migrating into CMF 67 (Option 1). It does, however, assume that CMF 67 requirements equaled the total number of personnel reenlisting for CMF 67 from all sources (column b+g = 1289) and that an increased SRB would cause sufficient CMF 67 reenlistments to meet requirements (1289 - 3408 = 37.8% Net Reenlistment Rate). An SRB of 2A is used only for illustrative purposes and is not suggested as being applicable to all aviation maintenance MOS. It appears that certain MOS require no SRB while an SRB of 3A or 4A may be appropriate to others. It is recognized that major change in SRB applicability for one MOS can alter reenlistment rates for that MOS as well as other specialties in the CMF. The significant factor at this stage is not what is the appropriate SRB, but rather are sufficient MOS qualified personnel being retained in an MOS and if not, will additional monetary incentives provide an operational and cost effective solution.

Another retention issue involves the dissatisfaction of attack helicopter and to a lesser extent scout helicopter crew chiefs. Significant dissatisfaction was expressed by these personnel regarding perceived flight pay inequities. This results from their aircraft having no requirement for

flying crew chief. They view their position, when compared to UH-1 and CH-47 contemporaries, as one with all of the crew chief disadvantages (irregular hours and poor working conditions) but none of the inherent advantages (flight pay and mission participation). First term reenlistment data does not strongly support this as a major factor to retention. However, it is felt that a significant increase in crewmember flight pay, which is under consideration, would be a significant detriment to MOS 67Y and 67V first term retention. In that crewmember flight pay is inappropriate for 67Y, and 67V unless employed as a scout observer, it appears that consideration should be given to both EB and increased SRB if crewmember flight pay is increased.

In view of increased demand for civil aircraft mechanics, an increased number of civil aircraft mechanics becoming eligible for retirement, and reductions in the 17-year-old population eligible for military service, it appears that retention of qualified aviation maintenance personnel beyond the first enlistment will become even more important during the next decade. Projections for the 1980-1990 period call for a 49 percent increase in civil aircraft (from 211,000 to 314,000 aircraft), 41 percent (23,000) of the airline licensed mechanics becoming retirement eligible during the 1980-1985 period, a minimum of a 28,000 shortfall in licensed airline mechanics by 1985, and a 21 percent reduction in 17-year-old male and female personnel eligible for recruitment (4 million to 3.15 million by 1990).

C. FINDINGS.

(1) The Rate at which aviation maintenance personnel reenlist for their current MOS, beyond first enlistment, is unsatisfactory, costly, and impacts heavily upon current and extended term readiness.

(2) The sizeable number of personnel who are reenlisting for CMF 67 from other CMF's represents significant skill dissipation to the losing MOS, a major retraining expense, and contributes heavily to the skill/experience/grade mismatch in CMF 67.

(3) Current incentives to reenlistment and overall retention in aviation maintenance MOS are inadequate to meet qualitative skill and experience requirements. This results from considering SRB need based upon the number of personnel reenlisting for an MOS (quantitative assessment) and ignoring what portion of those reenlistees are qualified in or are being retained in the MOS (qualitative assessment).

(4) Increased crewmember flight pay will cause a significant degradation in first term reenlistment rates for helicopter repair MOS not authorized crewmember flight pay (67V and 67Y).

(5) During the 1980-1990 period the requirement for civil mechanics will increase significantly while the supply of mechanics and potential mechanics will decrease.

D. RECOMMENDATIONS.

(1) Approve nonmonetary recommendations which influence retention.

(2) Develop and employ monetary incentives to retention as required to meet aviation maintenance qualitative and quantitative requirements.

13. AVIATION MAINTENANCE MOS CONTINUATION RATES.

A. BACKGROUND. Continuation rates are factors used to predict how many soldiers in particular year groups will remain in the Army (or in the MOS) 1 year later.

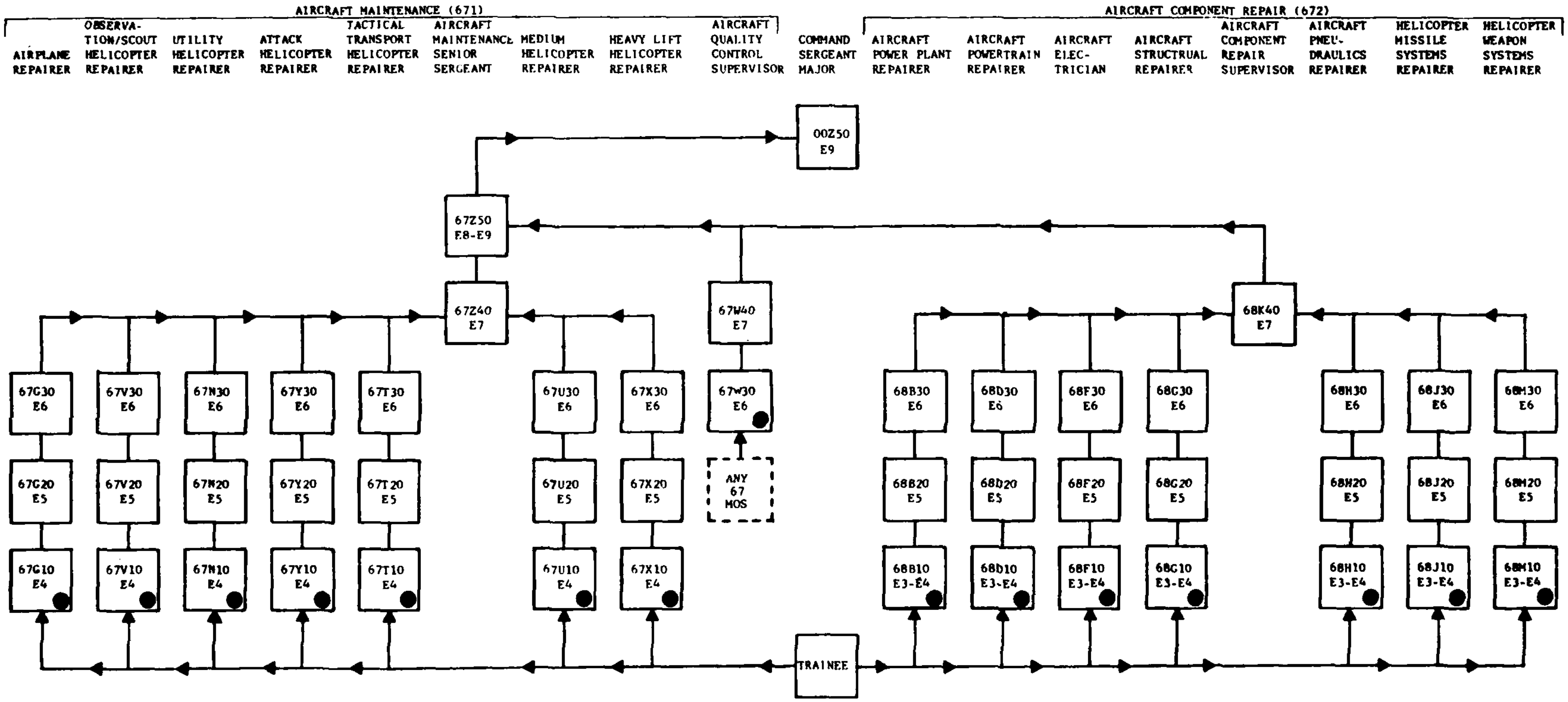
B. DISCUSSION. One of the methods used by personnel managers in analyzing the current status of CMF/MOS is Army-wide continuation rates. These Army-wide rates fail to present an accurate picture of the projected strength status of Aviation Maintenance MOS. To improve the analysis capability, personnel managers must develop more accurate continuation rate data by MOS.

C. FINDING. Future requirements for aviation maintenance personnel cannot be accurately determined because MOS continuation rates have not been developed.

D. RECOMMENDATION. Determine continuation rates for CMF 67 MOS.

ANNEX A

CAREER MANAGEMENT FIELD--AVIATION MAINTENANCE (67)



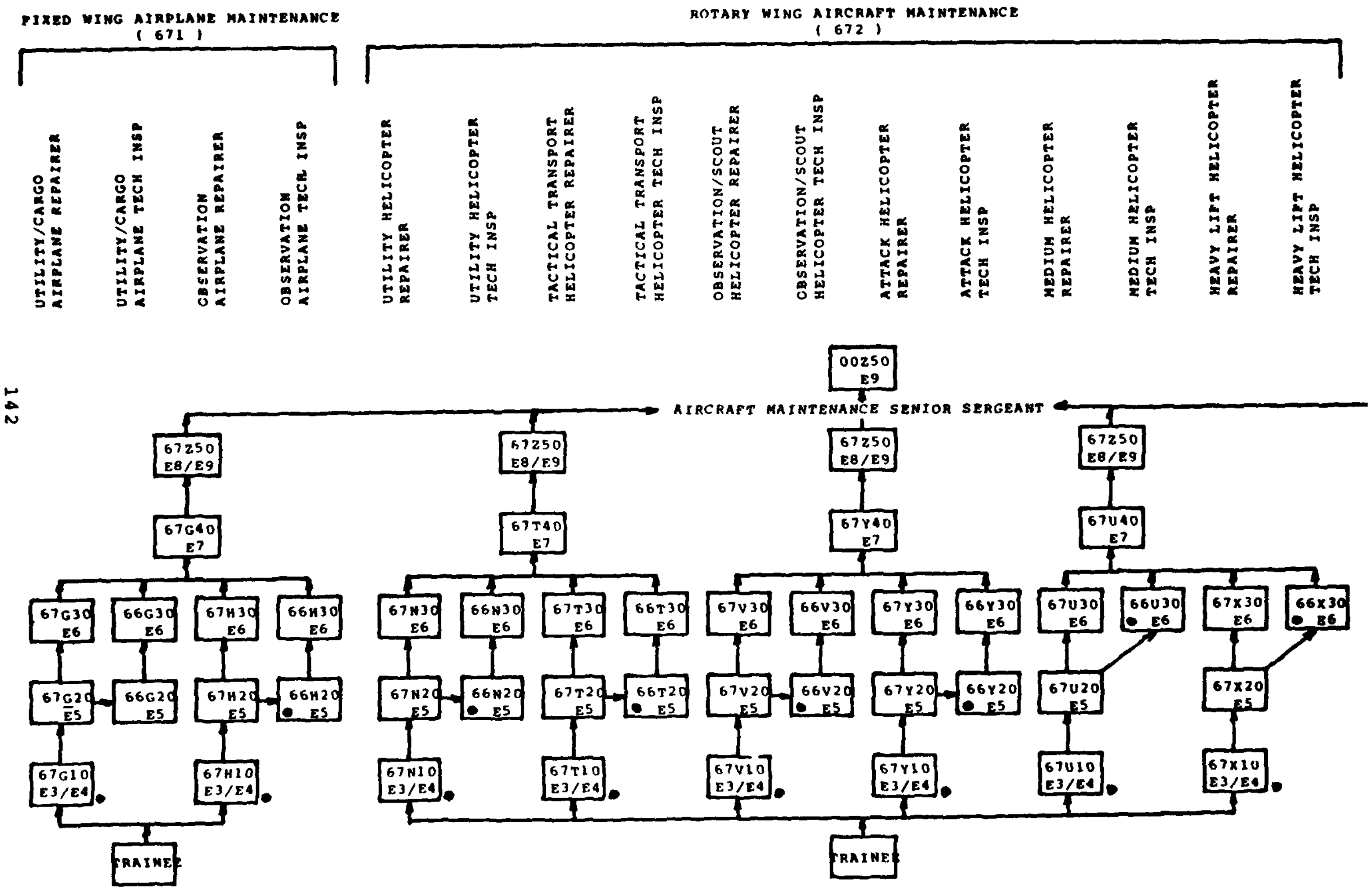
SUBSTITUTABILITY: Between MOS 67N, 67V, and 67Y at comparable level of skill; between MOS 68J and 68M at comparable level of skill.

→ Line of normal progression.

● Approved service school program of instruction. Refer to DA Pam 351-4 for course information and to appropriate class schedule for availability of classes.

ANNEX B

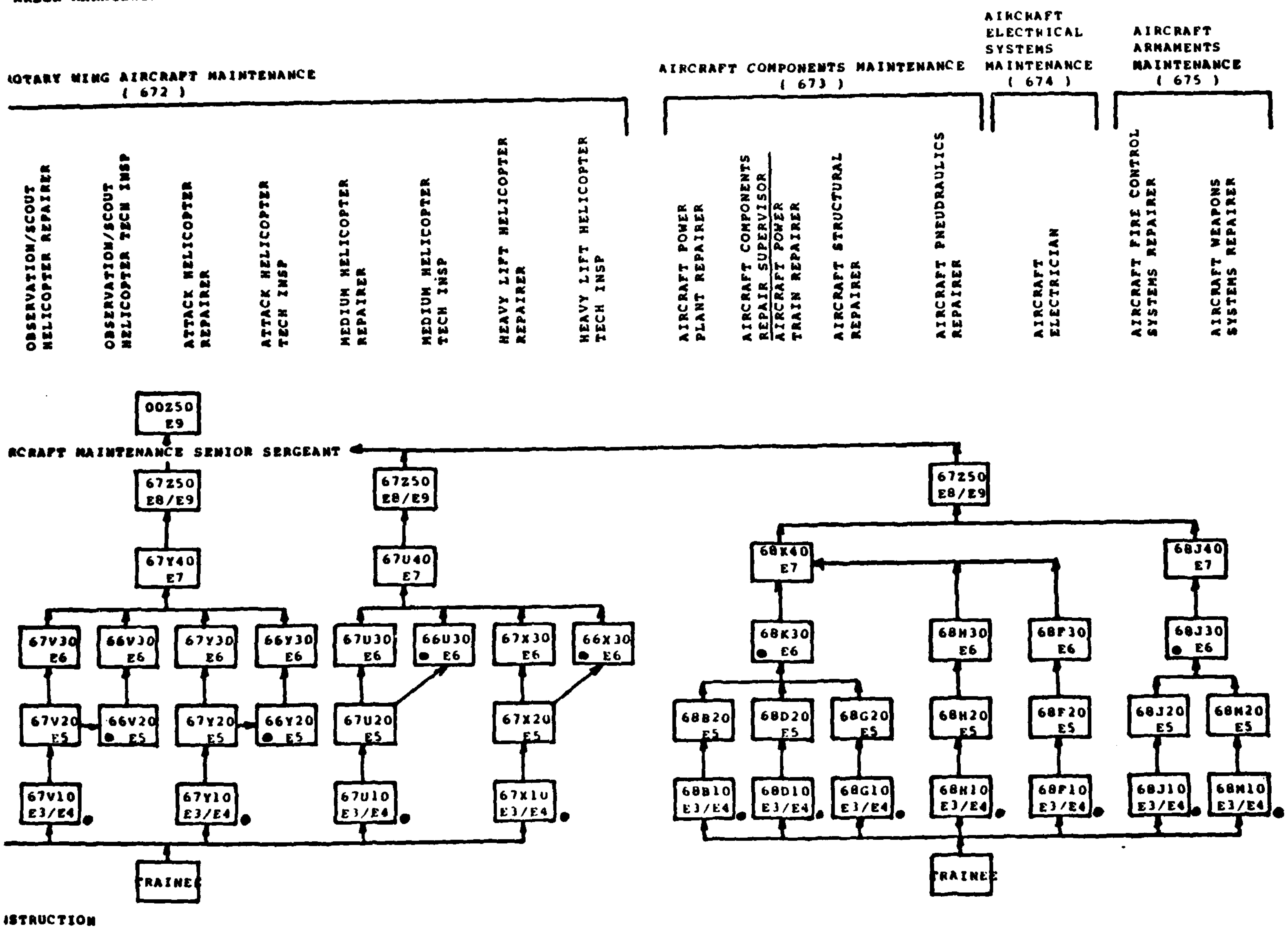
CAREER MANAGEMENT FIELD---AVIATION MAINTENANCE (67)



SUBSTITUTABILITY: NONE

● SERVICE SCHOOL PROGRAM OF INSTRUCTION

'AREER MANAGEMENT FIELD---AVIATION MAINTENANCE (67)



ANNEX C

CMF 67

MOS LISTINGS

CURRENT

MOS	TITLE
67G	Airplane Repairer
67N	Utility Helicopter Repairer
67T	Tactical Transport Helicopter Repairer
67U	Medium Helicopter Repairer
67V	Observation/Scout Helicopter Repairer
67W	Aircraft Quality Control Supervisor
67X	Heavy Lift Helicopter Repairer
67Y	Attack Helicopter Repairer
67Z	Aircraft Maintenance Senior Sergeant
68B	Aircraft Powerplant Repairer
68D	Aircraft Powertrain Repairer
68F	Aircraft Electrician
68G	Aircraft Structural Repairer
68H	Aircraft Pneudraulics Repairer
68J	Helicopter Missile Systems Repairer
68K	Aircraft Component Repair Supervisor
68M	Helicopter Weapon Systems Repairer

PROPOSED

MOS	TITLE
66G	Utility/Cargo Airplane Technical Inspector
66H	Observation Airplane Technical Inspector
66N	Utility Helicopter Technical Inspector
66T	Tactical Transport Helicopter Technical Inspector
66U	Medium Helicopter Technical Inspector
66V	Observation/Scout Helicopter Technical Inspector
66X	Heavy Lift Helicopter Technical Inspector
66Y	Attack Helicopter Technical Inspector
67G	Utility/Cargo Airplane Repairer
67H	Observation Airplane Repairer
67N	Utility Helicopter Repairer
67T	Tactical Transport Helicopter Repairer
67U	Medium Helicopter Repairer

67V	Observation/Scout Helicopter Repairer
67X	Heavy Lift Helicopter Repairer
67Y	Attack Helicopter Repairer
67Z	Aircraft Maintenance Senior Sergeant
68B	Aircraft Powerplant Repairer
68D	Aircraft Powertrain Repairer
68F	Aircraft Electrician
68G	Aircraft Structural Repairer
68H	Aircraft Pneudraulics Repairer
68J	Aircraft Fire Control Systems Repairer
68K	Aircraft Components Repair Supervisor
68M	Aircraft Weapon Systems Repairer

ANNEX D

CHAPTER 4, AR 611-201

MOS/SQI NOT AVAILABLE FOR WAC PERSONNEL

4-1. Women are authorized to serve in any enlisted specialty except those listed below at any organizational level, and in any unit of the Army, except in Infantry, Armor, Cannon Field Artillery, Combat Engineer, and Low Altitude Air Defense Artillery units of battalion/squadron or smaller size.

4-2. The following MOS and SQI are closed to women:

a. MOS:
11B Infantryman
11C Indirect Fire Infantryman
11H Heavy Antiarmor Weapons Crewman
12B Combat Engineer
12C Bridge Specialist
12E Atomic Demolition Munition Specialist
12F Engr Tr VEH Repairman
12Z Combat Engineer Senior Sergeamt
13B Cannon Crewman
13C TACFIRE Opns SP
13E Cannon Fire Direction Specialist
13F Cannon Fire Support Specialist
16F Light ADA Crewman (Reserve Forces)
16P ADA Short Range Missile Crewman
16R ADA Short Range Gunnery Crewman
16S MAN PADS (Man Portable Air Def Sys Crewman)
17K Ground Surveillance Radar Crewman
17M Unattended Ground Sensor Specialist
19D Cavalry Scout
19E M48-M60A1/A3 Tank Crewman
19F Tank Driver
19G M551 SHERIDAN Crewman
19H M551 SHERIDAN Driver
19J M60A2 Crewman
19K XM1 Armore Crewman
19L XM1 Tank Driver
19Z Armor Senior Sergeant
24M VULCAN Sys Mech
24N CHAPARRAL Sys Mech
b. SQI: S-Special Forces

ANNEX E

SEMI-CENTRALIZED PROMOTION ALLOCATIONS

(ARMY WIDE LESS CMF 67)

OCT 78 - SEP 79

	E5 PZ	E5 SZ	E6 PZ	E6 SZ
OCT	2906	1929	2298	1460
NOV	1073	728	1375	924
DEC	1728	1420	1530	1302
JAN	3945	1630	1193	581
FEB	1304	872	484	216
MAR	2558	1908	1457	1128
APR	1406	880	383	4
MAY	1915	1358	198	2
JUN	2281	1124	386	114
JUL	1588	815	535	278
AUG	4563	1722	1151	890
SEP	2963	1515	887	547
	28230	15901	11877	7446
LESS CMF 67	-801	-996	-725	-47
TOTAL	27429	14905	11152	7399
	64.8%	35.2%	60.1%	39.9%

CMF 67 PROMOTION ALLOCATIONS

OCT 78 - SEP 79

MOS	E5 PZ	E5 SZ	E6 PZ	E6 SZ
67G	67	40	31	0
67N	259	229	209	9
67T	0	0	3	0
67U	58	58	109	2
67V	156	329	135	1
67X	0	0	41	3
67W	N/A	N/A	7	0
67Y	125	229	73	4
68B	0	0	8	0
68D	1	0	1	0
68F	9	2	3	0
68G	46	69	61	0
68H	6	1	4	0
68J	16	10	20	27
68M	58	29	20	1
TOTAL	801	996	725	47
	44.6%	55.4%	94.0%	6.0%

TIME IN SERVICE

FOR PROMOTION

CMF 67

MOS	AVERAGE TIME IN SERVICE E5	AVERAGE TIME IN SERVICE E6	MEDIAN E5	MEDIAN E6
67G	3.3	11.6	2.9	10.6
67N	3.5	10.3	2.6	10.0
67U	3.4	8.8	2.8	8.2
67V	3.0	8.7	2.6	8.4
67W	None	9.6	None	9.3
67X	3.9	10.4	3.9	10.4
67Y	3.2	9.7	2.9	9.2
68B	3.3	10.4	3.0	9.7
68F	3.3	N/A	2.8	N/A
68G	3.1	10.5	2.7	9.9
68H	3.7	14.8	3.3	14.0
68J	3.6	7.6	3.1	8.1
68M	5.3	9.0	4.4	9.2

NOTE: Data is for FY 78 and First half of FY 79.

AVERAGE TIME-IN-SERVICE FOR EM PROMOTION

	ARMY		NAVY		MARINE CORPS		AIR FORCE	
	FY 78	FY 77	FY 78	FY 77	FY 78	FY 77	FY 78	FY 77
E-9	21.47	22.96	20.50	20.40	21.79	21.44	23.31	23.19
E-8	18.67	18.95	17.53	17.27	18.14	18.16	20.47	21.07
E-7	15.01	13.63	13.56	14.30	11.56	11.60	17.14	17.43
E-6	8.10	7.72	8.68	8.25	6.43	6.39	12.98	13.52
E-5	3.58	3.48	3.76	3.72	3.05	3.06	5.95	6.03
E-4	1.66	1.60	2.19	2.17	2.15	1.96	2.75	2.63
E-3	.99	.92	1.09	1.11	1.19	1.19	.97	.99
E-2	.52	.44	.48	.46	.58	.59	.46	.45

ALL FIGURES REPRESENT YEARS OF ACTIVE MILITARY SERVICE.

CMF 67 PROMOTION OPPORTUNITY

MOS	To E4 Current	To E4 Proposed	To E5 Current	To E5 Proposed	To E6 Current	To E6 Proposed
67G	1.000*	.964	1.000*	.957	.641*	.727
67H	N/A	.969	N/A	.937	N/A	.827
67N	1.000*	.966	1.000*	.999*	.471*	.733
67U	1.000*	.960	1.000*	.966	1.000*	.889
67V	1.000*	.976	1.000*	.975	.582*	.724
67Y	1.000*	.976	1.000*	.928	.526*	.773
68B	.837	.938	.825	.915	.523*	.700*
68D	.708	.972	.627*	.889	.462*	.701*
68G	.930	.970	.943	.944	.393*	.702*
68F	.827*	.903	.847	.853	.317*	.637*
68H	.586*	1.000*	.739*	.656*	.229*	.676*
68J	.977	.931	.879*	.896	1.000*	.689*
68M	1.000*	.946	.659*	.937	.825	.696*
CMF AVE	1.000*	.968	1.000*	.953	.642*	.747
EPMS GOAL	.83-.99		.81-.99		.72-.92	

MOS	To E7 Current	To E7 Proposed	To E8 Current	To E8 Proposed	To E9 Current	To E9 Proposed
67G	.782*	.729	.395	.505	.283	.477
67H	N/A	.740	N/A	.554	N/A	.633
67N	.784	.755	.417	.523	.386	.440
67U	.781	.755	.400	.514	.253*	.387
67V	.785	.751	.417	.513	.402	.428
67Y	.785	.755	.417	.518	.382	.436
68B	.642	.767	.418	.554	.663	.526
68D	.637	.753	.455	.505	.896*	.477
68G	.657	.758	.468	.526	.824*	.492
68F	.665	.761	.495	.517	.896*	.663
68H	.918	.759	1.000*	.503	1.000*	.526
68J	.648	.748	.411	.546	.372	.526
68M	.650	.743	.399	.538	.526	.463
CMF AVE	.764	.754	.415	.523	.364	.447
EPMS GOAL	.56-.99		.27-.77		.26-.76	

*Exceeds EPMS Goal.

NOTE: Promotion opportunity for E5 and E6 personnel in 66 Series MOS are included as part of the corresponding 67 Series MOS analysis.

ANNEX F

OPTION 1 - FY 78 PROGRAM

COMPARATIVE COST

Assumptions:
a. Personnel reenlisting are E5 with less than 4 YOS.
b. Reenlistment period 4 years.
c. SRB 1A as currently appropriate.
d. AIT cost.
e. 1289 reenlistments for CMF 67 (753 from CMF 67,536 from other MOS).

Annual Pay/Allowances:

$641.40	Base
209.70	BAQ
96.30	BAS
$947.40	
12	
$11,368.80	
X 1289	Personnel
$14,654,383	

SRB Cost (1A to MOS 67N, 67U, 67V, 67Y 68G, 68J):

$641.40	Base
X 4	Years
2565.6	
X 578	Personnel
$1,482,917	

Retraining Cost (536 Personnel):

67G -	$599,880
67N -	2,821,500
67V -	1,014,828
67V -	1,316,805
67X -	21,225
67Y -	308,490
68B -	162,620
68D -	61,288
68F -	362,420
68G -	963,200
68H -	125,000
68J -	360,864
68M -	26,016
	8,144,136
Travel	134,000
	$8,278,136

$14,654,383	Pay/Allowances
1,482,917	SRB
8,278,136	Retraining
$24,415,436	Total Cost

Average Cost Per Retention: $18,941.38

OPTION 2 - SRB of 2A

COMPARATIVE COST

Assumptions:

a. Reenlistees - E5 with less than 4 YOS
b. Reenlistment Period - 4 years
c. 1289 Reenlistees - All from CMF 67
d. SRB 2A - All reenlistees

Annual Pay/Allowances:

$641.40	Base
209.70	BAQ
96.30	BAS
$947.40	
X 12	
$11,368.80	
X 1289	Personnel
$14,654,383	

SRB Cost:

$ 641.40	Base
X 4	Reenlistment Period
2565.60	
X 2	SRB
$ 5131.20	
X 1289	Personnel
$6,614,117	

$14,654,383	Pay/Allowance
6,614,117	SRB
$21,157,500	

Average Cost Per Retention: $16,413.89

OPTION 3 - FY 78 Program with

NEW ACCESSIONS IN LIEU OF MIGRATIONS INTO CMF 67

Assumptions:

a. Reenlistees - E5 with less than 4 YOS
b. Reenlistment Period - 4 Years
c. 753 Reenlistees from CMF 67
d. SRB 1A as appropriate (FY 78 Program)
e. 536 New assessions in lieu of FY 78 migrations into CMF 67
f. New accession first year attrition - 26%
g. Accession/BT cost - $4024

Pay/Allowances Reenlistees:

$11,368.80
X 753
$ 8,560,706

Pay/Allowance Accessions

$ 500.10 E2 Base
X 12
$ 6000.10 Annual Pay
X 605
$3,630,061

AIT COST:

$8,278,136 (Annex F)
X1.1287 Attrition Factor
$9,343,859

SRB Cost:

$1,482,917 (Annex F)

Accessions/Recruits

536
X 1.1287 Attrition Factor
605

Accession/BT Cost

$ 4024
X 536
$2,156,864
X 1.26 Attrition
$2,717,649

$ 8,560,706	Pay/Allowance
3,630,061	Pay/Allowance
1,482,917	SRB
2,717,649	Accession/BT
9,343,859	AIT
$25,735,192	Total Cost

Average Cost Per Retention: $19,965.24

AVERAGE MARGINAL MANPOWER ACQUISITION COSTS

1 ADDITIONAL MANYEAR BEYOND 753 REENLISTMENTS

OPTION 1 - FY 78 Program

Pay	$11,368.80
AIT	15,194.28
Travel	250.00
	$26,813.08

OPTION 2 - Increased SRB

	SRB 1A	SRB 2A	SRB 3A
Pay	$11,368.80	$11,368.80	$11,368.80
SRB	3,403.24	9,573.13	15,743.02
	$14,772.04	$20,941.93	$27,111.82

OPTION 3 - New Recruit Accession (Attrition Applied)

Pay	$ 6773.74
BT	5067.37
AIT	17,432.57
	$29,273.85

AIT TRAINING COSTS

MOS	TOTAL COST*
67G	$24,995
67N	$13,500**
67U	$17,804
67V	$12,541
67X	$21,225
67Y	$14,690
68B	$16,262
68D	$15,322
68F	$18,121
68G	$17,200
68H	$12,500**
68J	$20,048
68M	$26,016

Variable Accession Costs Including BT
$4024

*Total cost per FY 77 AIT graduate adjusted to FY 79 dollars
**Estimated

CHAPTER 5

ENLISTED AVIATION MAINTENANCE TRAINING

CONTENTS

CHAPTER 5

ENLISTED AVIATION MAINTENANCE TRAINING

1. INTRODUCTION. A sage once stated: "If you don't know where you are going, it's hard to tell if you got there." That in many ways, characterizes the past state of aviation maintenance training. During the past decade, training has reacted to revolutionary and evolutionary impacts of Systems Engineering and Instructional Systems Development while being concurrently required to place a competent aviation mechanic in the field. During this period the training developer has faced unreasonably short suspenses while being provided guidance which was vague, inconsistent, and often conflicting. It is therefore not unreasonable to find similarities between today's training and conditions noted by the 1975 TRADOC report titled "Instructional Technology Symposium." General De Puy indicated his concern when he stated: "--I've always been suspicious of Systems Engineering and anything like that that gets institutionalized and then it's placed in the hands of a great big structure. If we don't watch out, we'll just repeat it and in 1985 there will be another illustrious panel come in and say, well back in 1975 we briefed a guy named De Puy, and he sat there and appeared to be agreeing with us, but here it is 1985 and nothing's happened. But what will have happened in between is that we will have gone through the systems approach and have established instructional technology and training development things and placed it in the hands of a lot of untrained people and we won't get anywhere."

Aviation training discussed in this chapter is generally limited to enlisted MOS training for 13 AIT courses (one of which, 68H, is taught by the US Air Force) and aviation Basic Technical Course (BTC) training. Training conditions were those which generally existed at the end of 3rd Quarter FY 79. These courses of instruction were generally not a product of the ISD process and were not correlated with nor based upon the MOS critical tasks designated in Commander's Manuals (CM) and Soldier's Manuals (SM). Differences between existing institutionally taught courses and those tasks designated by CM's to be taught institutionally, generally reflect a requirement to reduce training resource expenditure while concurrently increasing training effectiveness. The latter being achieved by improvements in course design, instructional methodology, and by training only to meet initial proficiency requirements of a specific skill level and MOS. This philosophy entails a distribution of training responsibility between institutional and unit taught tasks with ultimate Skill Level 1 qualification being based upon a combination of initial entry and individual unit training. First line supervisors in units are responsible for training and evaluating the performance of their subordinates in accordance with the critical tasks identified in the CM and SM. This necessitates, among other things, a valid critical task list and an adequate number of technically qualified first-line supervisors to conduct subordinate training concurrently with accomplishment of other missions. Therefore, individual unit training becomes a major element of the unit mission and necessitates an appropriate allocation of resources (manpower, time, and equipment).

2. TRAINING DEVELOPMENT.

A. BACKGROUND. In discussing training development, it is necessary to acknowledge the differences between skills provided by current courses of instruction and the critical tasks designated as institutional and unit training responsibilities in CM's. The objectives of current courses of instruction, being generally of the pre-ISD vintage, do not systematically describe the task in measurable actions which precludes an objective comparison between proposed training represented by CM's and current training.

B. DISCUSSION. As of the end 3rd Quarter FY 1979, none of the aviation maintenance AIT courses of instruction had been properly or completely developed under the ISD process. Course design reflect a mixed system approach to development (Systems Engineering and early ISD guidance) and are conducted in either a self-paced, conventional, or mixed mode. Time constraints imposed under the EPMS Implementation Plan resulted in the priority of initial development effort being placed upon preparation of CM's, SM's, and Skill Qualification Tests (SQT). As a consequence, these items are not the product of a total ISD process and reflect haphazardly developed terminal learning objectives, an inadequate job and task analysis, inadequately validated tasks, improperly developed job performance measures, and significant inconsistency between similar MOS.

The Transportation School is fully aware of deficiencies in course development, has developed appropriate methodology for attaining desired standards, and has to varying degrees established a means of completing the ISD process for aviation maintenance training. Three new courses of instruction were scheduled for introduction (67U, 67Y, and 68M) and an external evaluation of 10 aviation maintenance MOS was conducted during FY 79. It is imperative that course redesign under the ISD process continue in a timely fashion. This is especially true in the case of MOS 67N and 67V, which are the most densely populated MOS and have received the least effort in terms of course development.

Specific problems of course design will be restricted to those associated with critical task identification and designation of training responsibility as reflected in current CM and SM. Problems associated with current courses of instruction will be discussed in a subsequent section.

The institutionally taught critical aviation maintenance tasks described in CM and SM, with the exception of those for MOS 68J and 68M which were not reviewed, provide neither the skills nor proficiency required of the AIT graduate. In that the aviation force structure includes no helper or assistant repairer positions, this results in the AIT graduate being an immediate training burden to the receiving organization. This would have significant resource implications if the organizational structure was redesigned to acknowledge the limited AIT graduate skills represented by

the CM. Even more serious implications would exist under a wartime environment because mechanics would not possess the minimum skills required of the duty positions they must fill. The limitations of proposed institutional training is also more significant when compared with the skills provided by current AIT courses. A general dissatisfaction exists in the field regarding the inability of today's AIT graduates to perform the duties required of the positions they must fill. In that today's courses of instruction generally represent a greater amount of institutional training than projected by the CM for future course of instruction, it means even greater problems to the field in the future.

Specific problems of CM and SM designated critical tasks include:

(1) Limited institutionally provided skills. The CM for MOS 67N (Utility Helicopter Repairer) reflects 31 of 122 (25%) Skill Level 1 critical tasks and 5 of 65 (8%) Skill Level 2 critical tasks being taught during AIT with the remainder being the responsibility of unit SOJT. Included in the 36 Skill Level 1 and 2 institutionally taught tasks, are 16 involving the preparation of forms, tags, and labels. Institutional training includes none of the 46 rotor and transmission tasks, less than 50% of the flight line tasks, 9 of 50 power plant tasks, 1 of 13 airframe tasks, 3 of 16 flight control tasks, 3 of 18 hydraulic tasks, and 3 of 12 phased maintenance tasks (See Annex A). In that UH-1 and AH-1 transmissions are essentially the same in terms of 67N and 67Y duties, it appears inconsistent that 14 of 60 critical rotor and transmission tasks for MOS 67Y are designated for institutional training and none for MOS 67N.

(2) Distribution of training responsibility does not adequately recognize field conditions regarding frequency of task occurrence, task critically, rate of learning decay, duty position requirements, TOE structure, and ability of the field to support unit MOS training requirements.

(3) The reading level of certain Soldier's Manuals exceeds that of the MOS population (MOS 67N SM reading grade level is 11.26).

(4) Distribution of critical tasks among skill levels does not adequately recognize duty position requirements, TOE structural variations, and frequency of task occurrence. Skill level distribution must recognize the organizational structure and what duties are required to be performed in the field by personnel filling the various duty positions. As an example, there is a significant difference between duties required of a 67V10 (Scout Helicopter Repairer) and a 67U10 (Medium Helicopter Repairer). The MACRIT for the CH-47 and SGA for the 67U MOS are such that a new AIT graduate can be absorbed into the maintenance structure with adequate supervisory capability to provide additional Skill Level 1 training. However, the MACRIT and SGA for units with OH-58 aircraft, normally necessitate a 67V10 AIT graduate being assigned directly to a helicopter crew chief position with minimal technical supervision.

(5) Critical task lists reflect unnecessary redundancies of task assignment to more than one MOS. This generally results from aircraft component repair tasks (electrical, engine, powertrain, structural, and pneudraulics) being inappropriately assigned to 67 series MOS aircraft repairers rather than to a 68 series MOS component repairer.

(6) Critical task lists fail to fully recognize the critical duties of an MOS. They also fail to adequately recognize the duties common to certain MOS. For example, "Rigging aircraft for aerial evacuation" should be common to MOS 67V, 67N, and 67Y rather than critical only to 67V. Replacing and removing an aircraft engine should be common to all 67 series MOS; however, it is not a 67V critical task. Generally, certain tasks such as preparation of forms and records and certain aircraft air crewmember duties should be common to all 67 series MOS; however, critical task lists fail to reflect them as such. Furthermore, with the exception of MOS 67U (Medium Helicopter Repairer), the 67 series MOS critical task lists fail to reflect any air crewmember duties. Air crewmember duties in preparation for and during flight, to include door gunner duties, should be included where appropriate.

(7) SQT's, were derived in the same manner as CM and SM critical tasks and reflect the same deficiencies. Therefore SQTs are not based upon validated job and task analysis, do not adequately reflect the duties which must be performed by an MOS at specific Skill Levels, and do not adequately correlate with current training curriculum. It was predicted by the Study Group in July 1979 that aviation maintenance personnel would fare poorly on Skill Qualification Testing. However, resolution of SQT problems requires that attention be given first to other CMF 67 problems pertaining to organizational structure inadequacies, MOS structure limitations, technical supervisory capabilities, and training deficiencies. Correction of these problems will allow the evolution of SQTs which properly assess the state of aviation maintenance technical proficiency.

A central feature of effective aviation maintenance training is a properly developed and validated job and task analysis which fully recognizes real world implications of force structure requirements and the personnel management system. The distribution of critical tasks as indicated in CM's fails to adequately reflect these considerations. They generally reflect a time constrained, inadequate ISD process.

The FY 1979 external evaluation of 10 aviation maintenance MOS by the US Army Transportation School indicates that a portion of the problems noted above have been recognized. However, it appears that caution is necessary in applying the evaluation results. This is necessary because of the following factors:

(1) Graduate Sample Size - The graduate sample size for MOS 67V (39 - 3% of E3/E4 authorizations), 68B (34), 68D (25), and 68F (18) is a very narrow basis for critical task decisions. Furthermore all sample sizes,

other than 67Y, would appear limited in terms of statistical validity once variations in unit of assignment (AVUM and AVIM) and duty position (repairer and air crewmember) are considered.

(2) Critical task designations reflect many of the deficiencies noted above, with the exception of unnecessary task redundancy. As an example, engine change is still not a 67V10/20 critical task (supervision of removal is a 67V30 task) and commonality of duty requirements is still not present in task selection (critical tasks regarding "Form Preparation" differ among 67N, 67U, 67V, and 67Y).

(3) MOS 68J and 68M data appears unusable in present form due to aggregation of data.

(4) Task skill level designation tends to reflect the current force structure and not necessarily requirements - The CH-47 crewchief is a Skill Level 3 position and Skill Level 3 personnel are performing the duties currently; consequently the evaluation will tend to reflect CH-47 crewchief duties as being Skill Level 3 tasks. It also appears that the results are potentially confounded by the aviation maintenance experience and technical qualifications of the supervisor's questioned.

It is felt that current training plans fail to assess the efficacy of the total MOS training program. Current plans seem primarily directed toward appropriate task and skill level designation, training to be rendered institutionally, development of appropriate institutional training methods, and to a lesser degree the development of exportable packages to support unit individual training and evaluation of institutional training effectiveness. Missing in these considerations is assessment of the fields capability to perform assigned MOS training, resources required to support field assigned training, time required of the field to train personnel to Skill Level 1 and 2 qualification, assessment of alternative training strategies in terms of cost/benefit relationship, the impact upon unit readiness, and capability for evaluation of overall MOS proficiency level. Critical task training responsibility cannot be imposed on the field without first recognizing field requirements and capabilities as well as consideration of the other factors noted above.

C. FINDINGS.

(1) The critical tasks identified in commanders and soldiers manuals are not based upon a thorough job and task analysis, have not been properly validated, and reflect a significant degree of inconsistency and inappropriateness.

(2) AIT acquired skills as designated by aviation maintenance Commander's Manuals are inadequate to meet wartime requirements.

(3) Aviation maintenance training development plans do not effectively recognize:

(a) The aggregate interrelationships between training, personnel management, and force structure implications.

(b) Unit mission requirements and capabilities.

(c) Total training implications (Institutional and Unit SOJT).

D. RECOMMENDATIONS. All training recommendations are included at the end of Section 4.

3. INSTITUTIONAL TRAINING.

A. BACKGROUND. Aviation maintenance AIT is being provided in six aircraft repair MOS (67G, 67N, 67T, 67U, 67V, and 67Y) and seven aircraft component repair MOS (68B, 68D, 68F, 68G, 68H, 68J, and 68M). Training is primarily provided by the US Army Transportation School (MOS 67N and preponderance of 67V training is conducted by the US Army Aviation School, 68H training is conducted by the US Air Force). The US Army Transportation School also provides BTC training for all E6 MOS (except 67W and 68H) and noncommissioned officer aviation maintenance advance course training.

B. DISCUSSION. As noted previously, current AIT is generally unchanged from that presented five to seven years ago. Training was developed using System Engineering and pre-ISD processes; training is presented using self-paced, conventional, and mixed methodology; courses were not designed in support of and generally do not correlate with the CM/SM critical task lists (with the exception of instructional packages developed under civilian contract); course objectives have not been validated in terms of field requirements; courses contain training inappropriate to the MOS involved; and courses generally include no provisions for comprehensive end of course testing. However, current courses of instruction are significantly broader in scope than the critical task training projected by CM's for future institutional training.

Under current training concepts, an aviation repairer attains qualification at Skill Level 1 through a combination of initial entry training (BT and AIT) and individual unit training (SOJT). Subsequent qualification at Skill Level 2 is also based upon unit SOJT.

During visits with commanders and supervisors in the field, an almost complete dissatisfaction was expressed regarding aviation maintenance AIT. Conversely, there is a general lack of understanding in the field regarding current training concepts and methodology and little information is available to provide enlightenment on methodology. The most frequently heard compliants about AIT concern self-paced training, a lack of hands-on maintenance training, inability to use maintenance manuals, and an inability

to perform specific maintenance requirements of the field. Reasons for the field's perceptions are varied and frequently beyond control of the training base. Nevertheless, they are real and must be addressed. Reasons for field dissatisfaction with AIT include:

(1) Initial training is not compatible with the duty positions that graduates must fill. This fact is an inherent aspect of data discussed in Chapter 3, paragraph 2B. The fact that current force structure grade and skill requirements cannot be met mandates that personnel of lesser grade fill E5 positions. However, current training qualifies personnel to perform duties generally perceived as appropriate to E3 and does not prepare them to go immediately into E5 positions or fill positions requiring perceived E5 skills. The training program essentially trains personnel to fill positions requiring partial Skill Level 1 qualification and does not recognize the actual duties they must perform and the wide variance which exists in organizational structures.

As an example, 75 percent of MOS 67V E3-E5 authorizations are at AVUM level with 95 percent of AVUM authorizations being crew chief positions, which essentially means that all 67V AIT graduates going to AVUM units will be crew chiefs with no technical supervisory capability in their platoon. In MOS 67U conditions are vastly different as a result of significantly higher MACRIT data. In 67U, 82 percent of E3-E5 authorizations are at AVUM level, none of which are crew chiefs. In MOS 68H, 82 percent of E3-E6 authorizations are Skill Level 1 positions. Of the Skill Level 1 positions, 97 percent have no Skill Level 3 supervisor and 72 percent have no Skill Level 2 or Skill Level 3 supervisor.

(2) An awarness of current training curriculum - The field has no source for designation of skills provided by current courses of instruction. The incompatibility between current courses, current CM designated critical tasks, and duties of AR 611-201 only increase confusion and results in a wide range of misconceptions regarding duties of specific maintenance personnel.

(3) An unawareness of current training concepts - There is a significant lack of knowledge regarding training management and unit training responsibilities. Some supervisory personnel have the erroneous belief that AIT provides Skill Level 1 qualification. This is reinforced by new personnel arriving with a 1 Skill Level designation, although they are only partially qualified, and by 67 series MOS personnel having been awarded the Aircraft Crewman Badge upon AIT graduation. Award of this badge to AIT graduates is in contravention of AR 672-5-1 in that personnel have not been "school trained for a principal duty" of flying crew chief. Furthermore only approximately 35% of E3-E5 positions require flying crew chiefs and the award provides an automatic and inappropriate promotion advantage (not available to 68 series MOS) in terms administrative promotion points.

(4) An unawareness of specific unit MOS training responsibilities - Again, the field has no definitive listing of their current MOS training responsibilities by virtue of a lack of correlation between current training and current CM's. Furthermore, Job Books, which are supposed to reflect individual MOS proficiency, are rarely used and were until recently, not authorized to be given to or discussed with anyone other than the individual being trained. In that aviation maintenance service schools do not elect to make Job Book entries for AIT graduates, because of infrequent field usage, and because they could not be provided to a new supervisor or unit; no one fully realizes the current status of MOS qualification.

(5) Inconsistencies beween AIT and field requirements - These result from improperly developed and validated training objectives and erroneous field perceptions regarding duty position and MOS requirements.

(6) Insufficient first-line supervisor authorizations, especially at the AVUM level. (See Tables 3-7 and 3-8)

(7) Inadequate technical qualification of first-line supervisors - As an example, flight platoon sergeants are authorized as MOS 67Z40(E7) with generally only E3-E5 personnel authorized; however, there is a significant possibility that the 67Z40 had no maintenance experience with the type aircraft involved, prior to being promoted to E7. No provisions exist for identification of technical inspectors (TI), consequently there is a high probability that assigned TI's are not school trained. School training for MOS 67W (Quality Control Supervisors) was terminated at the end of FY 78. Furthermore, a large number of 67W positions are actually TI positions which have been erroneously classified in authorization documents. There is also a high probability, in fixed wing organizations of receiving 67W personnel whose complete maintenance background is with rotary wing aircraft. Similar problems result in a lack of technical qualification for most component repair supervisors (68K40).

(8) Significant migration of career personnel into CMF 67, from other CMF, who lack the technical skill and experience appropriate to their grade - The rate at which personnel are reenlisting for CMF 67 from other CMF (see Chapter 4) and their pay grade, which is incompatible with their technical qualifications after attending an MOS producing course of instruction (partially SL 1 qualified), presents significant workload, supervisory, and training problems to field units.

(9) Promotion of personnel in CMF 67 without regard to Skill Level attainment - Generally the best qualified personnel are being promoted. However, a commander in the field cannot reasonably expect to receive a soldier qualified at SL 2 or SL 3 when a new E5 or E6 reports to his organization.

(10) Rapid personnel turnover rates among units in FORSCOM and Korea - Many supervisors in FORSCOM and Korea view their unit MOS training responsibility with frustration. They view their role as one of receiving

marginally qualified repairers from AIT, of being charged with completing their training, and to anticipate their loss in approximately 12 to 15 months (which is about the time required for technical qualification), to be replaced by more AIT graduates. In the same vein, many supervisors in Europe view their mission as one of conducting aviation maintenance AIT.

(11) Time delays between AIT graduation and first opportunity for hands-on application of school acquired skills - This problem manifests itself in many ways, some of which are unavoidable, but all of which contribute to learning decay and field dissatisfaction with institutional training. Examples of these delays include: Leave and travel after AIT, participation in Hometown Recruiting Program, local command orientation and training programs which are conducted prior to personnel reporting to their first duty assignment, and extended additional duty requirements which units frequently fill using recent accessions.

(12) Increased complexity of new equipment.

(13) Differences between trainability characteristics of current accessions and those for which the current training program was designed.

Training as well as the personnel management system and force structure must be revised to effectively recognize current and future requirements and capabilities. Training must also reflect an accurate assessment of skills required for each MOS at appropriate SL and provide an effective means of attaining overall MOS training objectives. This requires an efficient distribution of training responsibility (Institution/Unit SOJT/Other) in a manner which fully recognizes specific duty position requirements, resources available and required to support each level of training, and time required to complete training. This appears to necessitate a standardized, Army-wide, unit SOJT program with time phased training goals, adequate resources, and an effective means of appraising individual training status or progress. These factors are not evident in todays training. Institutional training is providing skills in areas beyond the scope of the MOS concerned (MOS 67N AIT includes 84 hours of engine training much of which appears appropriate to MOS 68B, MOS 67V receives training on 19 electrical tasks many of which appear appropriate to MOS 68F), and not providing adequate training in areas deemed essential by the field. Supervisory training also has deficiencies. Training, appropriate to Officer Basic and Advanced Courses, Maintenance Officer Course, and NCOES Advanced and Basic Courses appear especially weak in the areas of unit maintenance management and training management. Other deficiencies include the lack of technical qualification training for MOS 68K, the termination of 67W training, and poor attendance and insufficient quotas to BTC training. BTC attendance was poor during FY 78 as reflected by attendance rates (See Annex B). However, of greater significance is that the command solicitation method of developing course quotas generally fails to generate sufficient quotas to meet force structure requirements. Consequently, attendance rates are irrelevant in terms of sufficient supervisors being trained to meet qualitative force structure needs.

MOS training must be viewed in the aggregate (institutional/unit SOJT) and properly aligned with requirements of the field, the MOS structure, and the organizational structure. For instance this means explicit recognition that duties performed by and supervision available to MOS 67V (1.05 repairers authorized per aircraft) is significantly different than MOS 67U (4.63 repairers authorized per aircraft). These authorizations mandate the preponderance of 67V's becoming aircraft crew chiefs immediately following AIT graduation. It is difficult to quantify current training effectiveness or quantify how effective training can become. However, it is apparent that current aviation maintenance training is not making the most effective use of resources in providing the skills required by the current and future force structure. The aviation maintenance training system must:

(1) Strengthen instruction in service school curriculums - This appears to mandate additional institutional training; however, this may not necessarily be true once training is properly aligned to initial duty requirements and unnecessary redundancy removed.

(2) Mandate a comprehensive, Army-wide unit SOJT program - Unit SOJT cannot continue as a hit or miss proposition.

(3) Improve attendance at Basic Technical Courses of Instruction - Quotas and attendance must be sufficient to sustain first-line supervisor requirements of the force structure.

As a minimum requirement, the training system must produce an AIT graduate with the necessary skills to perform on the battlefield and survive. If the MOS restructuring recommendations of this study are approved, it will require training development action to support:

(1) All AIT courses of instruction.

(2) Aircraft specific Technical Inspector/Quality Control courses of instruction.

(3) Merger training (BTC) for MOS 68J30.

(4) Merger training (BTC) for MOS 68K30.

(5) Termination of courses for MOS 67W and 68H.

C. FINDINGS.

(1) Aviation maintenance AIT does not provide sufficient training to enable the graduate to perform the tasks required of him on the battlefield.

(2) The current CMF 67 AIT courses have not been properly developed; are not based upon an ISD process, have not been properly validated, generally include no comprehensive end-of-course testing, and are not compatible with current Commander's and Soldier's Manuals.

(3) Current CMF 67 AIT courses do not make the most effective use of training resources.

(4) The current training program is not providing sufficient, technically qualified first-line supervisors.

(5) Disparities between force structure requirements, MOS structures, and training methodology contribute to current training ineffectiveness.

D. RECOMMENDATIONS. All training recommendations are included at the end of Section 4.

4. UNIT MOS TRAINING.

A. BACKGROUND. As noted previously, the current training philosophy provides for certain aviation maintenance tasks to be taught as a part of AIT with remaining critical tasks associated with Skill Level (SL) 1 and 2 qualification being acquired in units under a supervised on-the-job training program (SOJT). The SOJT concept is, in theory so logical, simple, and potentially cost effective, that it is easy to be mislead by its apparent effectiveness. In theory, personnel are trained institutionally on those more complex, high frequency tasks which have a high probability of usage by AIT graduates during the first 6 to 12 months on the job. The AIT graduate reports to his first unit with skills appropriate to his first job assignment and properly prepared for further training. The unit work environment, supported by technically qualified first-line supervisors, who serve as trainers, provide reinforcement training on previously acquired skills as well as training on the remaining tasks required for SL qualification. On the surface this appears as a panacea to all training ills. It implies minimum non-productive time in the training base, minimum training decay associated with inability to use school acquired skills, minimum essential expenditure of training resources, and maximum manpower availability to field organizations where further training becomes an inherent part of normal maintenance actions. However, for this process to be effective, it is essential that many factors be considered. These include:

(1) Correct designation of critical tasks by MOS and SL.

(2) Adequate recognition of unit maintenance requirements.

(3) Adequate recognition of organizational structures in terms of duties associated with positions filled by new AIT graduates and unit mission.

(4) Sufficient unit authorizations for technically qualified, first-line supervisors.

(5) Appropriate distribution of training responsibility in terms of unit capability.

(6) Compatibility of unit training requirements and frequency at which maintenance actions occur.

(7) Appropriate distribution of dedicated resources required to support training (time, equipment, and manpower).

(8) An assessment of time required to train (institution and unit SOJT) to the required level of competency to insure that qualitative force structure requirements can be sustained.

(9) An effective training program for developing technically qualified supervisors.

(10) Adequate recognition of MOS and CMF structures.

(11) Adequate understanding by commanders and supervisors of current institutional and unit training responsibility.

These in effect require a comprehensive, Army-wide SOJT program with milestones established for individual progress and a means of evaluating overall training effectiveness. It also means an active SOJT program where individual MOS training is an inherent aspect of unit mission. To do otherwise is to have a maintenance program which is a potential disaster.

B. DISCUSSION.

The factors noted above have either been excluded or not effectively included in the development of current aviation maintenance training. Consequently, aviation commanders and supervisors in the field face a significant handicap in terms of mission accomplishment. They have no information on current AIT course content, receive no information on specific skills possessed by AIT graduates or replacement personnel, and recognize many inconsistencies in current CM and SM. They are faced with an operational flying mission and an associated aircraft maintenance mission, which are somewhat comparable during peacetime and wartime; with less than adequately qualified personnel, insufficient technically qualified supervisors, and a major training responsibility. The selection between the training and operational mission is simple and the commander is forced to perform the operational mission. As a result, those personnel who would be used to train new arrivals are diverted to mission required maintenance and skill qualification of the maintenance force suffers. In the meantime, unskilled personnel are being promoted to Skill Level 2 which leads to a decreased level of competency in the maintenance force and eventually to less qualified supervisors. The current training program has many characteristics of the old "shell game" with the commander in the field holding the empty shell. It is as if the current training program was a product of reductions in resources available to support institutional training, which resulted in reductions in institutional training and identification of all remaining training being the responsibility of unit SOJT. The latter being mandated without adequate recognition of the skills

required of AIT graduates and without any assessment of the field's capability to successfully execute SOJT requirements. (To this study groups knowledge, no assessment has ever been made regarding the magnitude of unit SOJT requirements, extent of unit capability to accomplish, adequacy of first-line supervisors to support, time required to complete SL 1 and 2 training, and cost of an ineffective program in terms of reduced unit readiness and increased maintenance error rates). The resultant SOJT program is essentially a reactive (reacting to day-by-day requirements), hit or miss system. Indicators of a less than effective aviation maintenance program are readily evident in the form of increased maintenance error mishap rates, limited technical qualifications, low first term retention rates, and high personnel frustration. Problem resolution; however, goes beyond development of an effective training program. It necessitates a recognition of the aggregate training, personnel management, and force structure implications.

Training problems facing the field are many and varied. The preponderance of these problems have been noted previously in this section or in Section 2 under Training Development. Additional problems include:

(1) Magnitude of unit training responsibility - Annex C and D reflect Commander's Manual distribution of training responsibility and indicates that unit SOJT is responsible for 71% of 67 series MOS Skill Level 1-3 critical task training and 51% of 68 series MOS Skill Level 1-3 training. The unit training load is of even greater magnitude when one considers the number of critical tasks involved (194 SL 1-3 unit SOJT tasks for MOS 67Y), the number of MOS for which the unit has SOJT responsibility (22 in an Air Cavalry Troop), and the number of authorized first-line supervisors.

(2) The number of personnel requiring extensive SOJT which are assigned to units - Approximately 34 percent (4,431) of all aviation maintenance Skill Level 1 and 2 positions are filled by personnel who have been out of AIT for less than one year. Approximately 14.9% (1,133) of all E3 and E4 positions are filled by personnel who have been out of AIT for less than 90 days. The magnitude of these numbers in conjunction with the magnitude of tasks requiring unit SOJT and the number of non-aviation MOS requiring SOJT, results in an inordinate unit training mission.

(3) The fragmented nature of organizational structures - The current tendency of organizational structures to fragment authorizations for a specific MOS among many diverse unit platoons, sections, and elements; generally without technical supervision, mandates an ineffective and uncoordinated SOJT program. Regardless of the ultimate disposition of CMF 67 training it appears essential that unit SOJT be centralized to the maximum extent possible by maximum pooling of like MOS into one organizational element and by authorization of appropriate technical supervisors.

(4) Incompatibility of MOS/CMF structure and unit mission and capabilities - Significant in this regard is the current inability to recognize TI force structure requirements or recognize personnel who have been trained as TI's. Problems of equal magnitude exist regarding MOS 67W, 67Z, and 68K and the fact that their prior experience and training is probably inappropriate for their current duties. This would normally not be a major problem for E7 positions; however, due to structural requirements, a vast number of these positions are actually first-line technical supervisors with no authorization for E6 subordinates. The study has attempted to alleviate many of these problems through a combination of MOS restructuring, SGA redesign, and authorization document revision. This has resulted in an increased number of authorizations for first-line technical supervisors, technical inspectors, and a more effective MOS structure.

The problems associated with technical qualification of MOS 67Z40(E7) has not been totally addressed by this study. Early during the study effort it was recognized that 67Z's were authorized as first line technical supervisors of both rotary wing and fixed wing flight platoons, as first-line technical supervisors of many component repair sections, and as supervisors of both rotary and fixed wing maintenance elements. Problems associated with fixed wing authorizations were solved by extending the fixed wing maintenance supervisor MOS to E7. Revision of authorization documents and MOS structure corrected the majority of component repair supervisor problems. However, the problem of technical qualification for rotary wing flight platoon sergeants and rotary wing maintenance supervisors remained. This is essentially a factor of MOS structure which results in all 67 series personnel merging into 67Z upon promotion to E7 and means that the flight platoon sergeant in an Attack Helicopter Company may have had no maintenance training or experience on attack helicopters prior to promotion to E7. Resolution was attempted by authorizing a technically qualified E6 as assistant platoon sergeant in each flight platoon; however, a more definitive analysis indicated that this could only be justified for CH-47 and CH-54 flight platoons. Another obvious solution was explored which entailed redistribution of 67Z authorizations. This procedure was a modification of MOS classifications existing approximately 15 years ago and consisted of the following MOS classification at E7 in lieu of 67Z authorizations:

(a) Utility/Tactical Transport Helicopter Maintenance Supervisor - MOS 67T40. (Merges MOS 67N30 and 67T30 at E7)

(b) Attack/Scout Helicopter Maintenance Supervisor - MOS 67Y40. (Merges MOS 67V30 and 67Y30 at E7)

(c) Medium/Heavy Helicopter Maintenance Supervisor - MOS 67U40. (Merges MOS 67U30 and 67X30 at E7)

This procedure, by virtue of the greater degree of technical qualification possessed by maintenance supervisors, would provide an enhanced unit maintenance and training capability. However, it would

require approximately 4-5% more E7 authorizations to provide for organizational requirements and adequately recognize promotion opportunity and career development requirements. It would also require increased personnel management considerations to support this MOS alignment. This proposal has many attractive features which could be readily incorporated in the CMF 67 study. However, in view of personnel end strength constraints imposed upon the Study, the proposal has not been incorporated in the proposed MOS and organizational structures. Rather it is suggested that MOS 67Z40 be replaced by 67T40, 67Y40, 67U40, and 67G40 if end strength constraints can be resolved.

Resolution of problems noted in this chapter entail an effective MOS job and task analysis; a recognition of personnel management implications, of force structure requirements, and of unit capabilities and requirements; and an assessment of the evolved training system in terms of its ability to provide the requisite skills in the number and at the time required. This assessment could result in a determination that skills required of a particular MOS cannot be provided institutionally or by unit SOJT in the time or to the degree required. This represents an MOS training/skill overload and may necessitate splitting an MOS into two or more MOS, each having less critical tasks and reduced training requirements. A definitive analysis of this problem could not be conducted due to the lack of a properly developed critical task lists and a comprehensive training assessment. However, in comparison with other military services, Army aviation maintenance occupational specialties generally represent broader scope specialties. As an example, where the Army has one aircraft engine repair MOS (68B), the Navy/Marine Corps might have 4 - one for each major grouping of engines, and the Air Force might have 7 - one for each type aircraft. This does permit reduced training, but as discovered by the other services significantly increases other personnel management and training problems.

Other approaches to training beyond institutional and unit SOJT programs include use of Field Training Detachments (US Air Force) which are located at major installation level and supplement other programs by providing advanced training on more complex tasks. Another potential method of supplementing institutional training is to use service school mobile training teams which visit major installations on a periodic basis and provide instruction on advance technical tasks which are not easily accomplished under SOJT programs. This method does provide for increased training awareness between the training community and the field.

It was interesting to note that a major commercial airline, whose maintenance training program is recognized for its effectiveness, makes extensive use of the SOJT concept. However, inherent in their program are:

(1) Valid job and task analysis.

(2) Authorization for instructors at both the training facility and at major operational facilities.

(3) An effective maintenance manpower support system - Includes a work control system, a maintenance information system, a facilities support system, and a training support system.

(4) Recognition that training prepares the technician to be more effective in learning how to do his work well. However, work trains the technician.

(5) Technician training effectiveness is dependent upon matching technician centered and situation centered factors.

(6) A comprehensive and specific methodology for all phases of technician training.

The implications of current training concepts were evident to the TRADOC commander when he stated in the November 1978 Aviation Digest, "We are on the verge of having to do much less individual training in the institution, much more in units. That increase in individual training will inevitably detract from unit readiness." However, he was undoubtedly talking of an effective SOJT program which recognized the specific training required by individuals and one which provided a structured means of attaining the requisite skills.

There is also a need to assess MOS training programs in terms of mobilization requirements. In this regard, an MOS with extensive SOJT Skill Level 1 and 2 requirements could be adequate during peacetime but totally unacceptable during mobilization. A review of aviation maintenance MOS Commander's Manuals regarding institutionally taught Skill Level 1 and 2 technical tasks, causes serious reservations concerning personnel being adequately trained to perform on the battlefield.

C. FINDINGS.

(1) The aggregate aviation maintenance training program lacks effective management.

(2) The aviation maintenance training program is not providing the skills required of the force structure.

(3) The aviation maintenance unit SOJT program is uncoordinated, fragmented, and suffers from a lack of definitive guidance, coherent training strategy, and meaningful training goals.

(4) The fields ability to conduct an effective unit SOJT program is limited by:

(a) An unawareness of current institutional training curriculum.

(b) Inappropriate MOS critical tasks lists.

(c) The magnitude of unit SOJT requirements.

(d) The conflict between unit SOJT training requirements and other unit missions.

(e) Inadequate resources-time, equipment, and first-line supervisors.

(f) Rapid personnel turnover.

(g) A shortage of technically qualified maintenance personnel.

(h) The fragmented nature of aviation organizational structures.

(5) The overall state of aviation maintenance training is not being effectively evaluated.

(6) The current aircraft maintenance supervisors MOS (67Z40 E7) is inadequate in terms of providing technically qualified personnel to meet specific organizational training and maintenance requirements. It also ignores the need for retention of technical skills as far through a soldiers career as possible.

D. RECOMMENDATIONS.

(1) Develop a comprehensive aviation maintenance training program which includes:

(a) Priorities and milestones for each MOS.

(b) Properly developed and validated MOS critical task lists.

(c) Effective distribution of training responsibility.

(d) Provisions for providing the required technical and supervisory skills at each grade level.

(e) Provisions for a comprehensive Army-wide SOJT program.

(f) Adequate resource allocation to support each mode of training.

(g) Provisions for assessing aviation maintenance training effectiveness at each level of training responsibility.

(2) Develop training plans and courses of instruction to support recommendations regarding revisions to MOS 67G, 67H, 67 series MOS BTC, 66 series MOS, 68K, 68F, 68H, 68J, and 68M.

(3) Incorporate into the MOS structure an E7 maintenance supervisors MOS, classified by type R/W aircraft (67T40, 67Y40, and 67U40 and eliminate MOS 67Z40.

ANNEX A

SOURCE OF INITIAL TRAINING FOR CRITICAL TASKS

UTILITY HELICOPTER REPAIRER MOS 67 N

	SKILL LEVEL 1		SKILL LEVEL 2		SKILL LEVEL 2	
	AIT	SOJT	AIT	SOJT	BTC	SOJT
FLIGHT LINE MAINTENANCE AND DUTIES	17	19	0	0	0	0
AIRFRAME & FUSELAGE MAINTENANCE	1	1	0	1	2	0
POWERPLANTS AND RELATED SYSTEMS	7	26	2	15	2	2
ROTOR AND TRANSMISSION SYSTEMS	0	35	0	11	8	0
FLIGHT CONTROL SYSTEM MAINTENANCE	0	4	3	9	3	0
UTILITY AND HYDRAULIC SYSTEM	3	4	0	11	1	2
GENERAL AIRCRAFT MAINTENANCE	0	1	0	3	0	1
GENERAL MAINTENANCE AND REPAIR SUPERVISORY DUTIES	0	1	0	1	0	3
PERFORMANCE OF PHASED MAINTENANCE DUTIES	3	0	0	9	0	0
SPECIAL AND TECHNICAL INSPECTIONS	0	0	0	0	0	3
ADMINISTRATIVE AND GENERAL SUPERVISORY DUTIES	0	0	0	0	0	1
TOTAL	31	91	5	60	16	12

ANNEX B

CMF 67 BASIC TECHNICAL COURSES

FY 78 ATTENDANCE DATA

MOS	QUOTAS	NUMBER ATTENDING	ATTENDANCE RATE	ANNUAL TRAINING REQUIREMENT*	PERCENT ANNUAL TRAINING REQUIREMENT ATTAINED
67G	61	4	7%	36	11%
67N	58	52	90%	145	36%
67U	43	41	95%	109	38%
67V	105	53	50%	65	82%
67Y	56	42	75%	51	82%
68B	36	20	56%	13	154%
68D	16	2	13%	5	40%
68F	21	3	14%	4	75%
68G	38	17	45%	19	89%
68J	18	5	28%	36	14%
68M	28	19	68%	17	112%

*If all of E6 population was BTC qualified-based on current and not proposed authorizations.

ANNEX C

SOURCE OF INITITAL TRAINING FOR CRITICAL TASKS

	SKILL LEVEL 1-3		SKILL LEVEL 1		SKILL LEVEL 2		SKILL LEVEL 3	
	INSTITU-TIONAL	UNIT SOJT	INSTITU-TIONAL	UNIT SOJT	INSTITU-TIONAL	UNIT SOJT	INSTITU-TIONAL	UNIT SOJT
67 MOS	29%	71%	41%	59%	6%	94%	50%	50%
67G	29%	71%	51%	49%	0%	100%	75%	25%
67V	41%	59%	64%	36%	16%	84%	68%	32%
67N	24%	76%	25%	75%	8%	92%	57%	43%
67Y	28%	72%	42%	58%	7%	93%	27%	73%
67U	31%	69%	47%	53%	5%	95%	42%*	58%
68 MOS	49%	51%	67%	33%	47%	53%	21%	79%
68B	36%	64%	40%	60%	43%	57%	0%	100%
68D	75%	23%	94%	6%	71%	29%	62%	38%
68F	49%	51%	62%	38%	57%	43%	0%	100%
68G	56%	44%	62%	38%	41%	59%	50%	50%
68H	50%	50%	100%	0%	8%	92%	0%	100%
67 CMF	37%	63%	49%	51%	25%	75%	38%	52%

* 12% TAUGHT IN AIT

DOES NOT INCLUDE 67T, 67X, 68J or 68M

ANNEX D

CRITICAL TASKS

DISTRIBUTION BY SKILL LEVEL AND TRANING RESPONSIBILITY

MOS	SKILL LEVEL 1-3			SKILL LEVEL 1			SKILL LEVEL 2			SKILL LEVEL 3		
	TOTAL	*I	SOJT	TOTAL	*I	SOJT	TOTAL	*I	SOJT	TOTAL	*I	SOJT
67G	184	54	130	77	39	38	87	0	87	20	15	5
67V	101	41	60	31	20	11	51	8	43	19	13	6
67N	215	52	163	122	31	91	65	5	60	28	16	12
67Y	270	76	194	144	61	83	96	7	89	30	8	22
67U	169	53	116	62	29	33	57	3	54	50	21	29
67 Series	939	276	663	436	180	256	356	23	333	147	73	74
68B	267	96	171	55	22	33	172	74	98	40	0	40
68D	114	86	28	31	29	2	59	42	17	24	15	9
68F	83	41	42	34	21	13	35	20	15	14	0	14
68G	75	42	33	48	30	18	17	7	10	10	5	5
68H	66	33	33	31	31	0	26	2	24	9	0	9
68 Series	605	298	307	199	133	66	309	145	164	97	20	77
CMF 67	1544	574	970	635	313	322	665	168	497	244	93	151

*I: Institutionally trained tasks.

Does not include 67T, 67X, 68J or 68M.

CHAPTER 6

AVIATION MAINTENANCE

CONTENTS

CHAPTER 6

AVIATION MAINTENANCE

1. INTRODUCTION. It has been written that readiness is the keystone to deterrence and that training is the foundation for readiness. It could be further stated that a high state of aircraft readiness is dependent upon adequate resources (personnel and equipment), an effective training program, and an effective force structure. In this vein, the state of aviation maintenance and its relative degree of effectiveness is collectively represented by a composite of the conditions noted in the other Chapters of this study. It is the perception of the Study Group that the aviation maintenance program of the United States Army suffers from lack of effective management, training, and structure. Reasons for this lack are varied; however, they have a serious impact on the future of Army aviation and must be corrected. It is the belief of the Study Group that implementation of recommendations contained in this study will go far in correcting these problems.

The aircraft maintenance concept includes three levels of maintenance: Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM), and Depot. AVUM is provided to operational flying organizations and consists primarily of preventive maintenance and repair and replacement functions associated with sustaining a high level of aircraft operational readiness. This includes the performance of inspections and servicing, identification of the cause of equipment malfunctions, replacement of worn or damaged components which do not require complex adjustments, and evacuation of unserviceable components beyond their repair capability to the supporting AVIM. AVIM provides maintenance support to AVUM and, in addition to performing all functions authorized at AVUM level, also performs functions beyond AVUM capability, maintains a direct exchange program, and evacuates items beyond their repair capability to Depot Maintenance. Under the provisions of AR 750-1, the maintenance organization will also include the capability for providing individual and unit training.

It should be noted that neither this Chapter nor the CMF 67 Study constitutes a comprehensive assessment of aviation maintenance capabilities or limitations. The findings in this Chapter are limited to an assessment of aviation maintenance issues associated with the study purpose: "...study and evaluate the personnel management program for enlisted aviation maintenance MOS series 67 and 68." If additional resources had been available, it would have been desirable to have conducted a more through analysis of many aviation maintenance areas to include specific MOS duty requirements and capabilities, organizational requirements and capabilities, and time spent by aviation maintenance personnel performing aviation maintenance functions.

2. ARMY AIRCRAFT MAINTENANCE ERROR.

A. BACKGROUND. The emergence of study data indicating problems in the areas of training, force structure, MOS structure, technical qualification of supervisors, and first term retention resulted in a hypothesis regarding maintenance error and perceived problems. If aviation maintenance problems were being accurately perceived in terms of their relevance and magnitude it was felt that there should be a direct correlation between these and maintenance error as an increased cause factor in aircraft mishaps (accidents, incidents, forced landings, and precautionary landings). Consequently, the US Army Safety Center provided the study of "Army Aircraft Maintenance-Error Mishap Experience" located at ANNEX A.

B. DISCUSSION. The Army Safety Center study covers the period 1 January 1974 through 31 March 1979 and is based upon an analysis of maintenance caused mishaps for all Army aircraft (except TH-55 and OH-6) and includes combined Active Army, Army Reserve, and Army National Guard experience. Rates are derived using the formula (mishaps X 100,000 - flying hours) which results in standardized rates per 100,000 flying hours. Minor variance will be noted in cost data included in this section and ANNEX A which results from updated data.

Study data indicates that maintenance error is a significant factor in the cause of aircraft mishaps and that the maintenance error related rotary wing aircraft mishap rate is increasing in an alarming manner. Of the 14,732 aircraft mishaps during the study period, maintenance cause factors were present in 11.3%. However, of even greater significance was their presence in 21.6% of all accidents, 31.9% of all costs, 22.7% of all fatalities and 27.5% of all injuires.

Maintenance error mishap rates by aircraft category and associated cost data are shown in Figure 6-1 and below (Specific aircraft data is included in ANNEX A):

MAINTENANCE ERROR MISHAP RATES
CALENDAR YEAR

	74	75	76	77	78	1Q79
F/W	27.7	27.5	26.3	26.6	25.8	40
R/W	15.6	15.8	18.4	20.7	28.6	41
AGGREGATE	17.2	17.4	19.5	21.5	28.2	40.9

MAINTENANCE ERROR MISHAP RATE
TREND LINE COMPARISON

	1st Quarter Cy 74	1st Quarter CY 79	Rate of Change
F/W	28.0	28.0	0
R/W	12.0	29.5	+146%

These data indicate that while the overall fixed wing trend has remained relatively constant, the rotary wing rate which was approximately half of

MAINTENANCE ERROR MISHAP

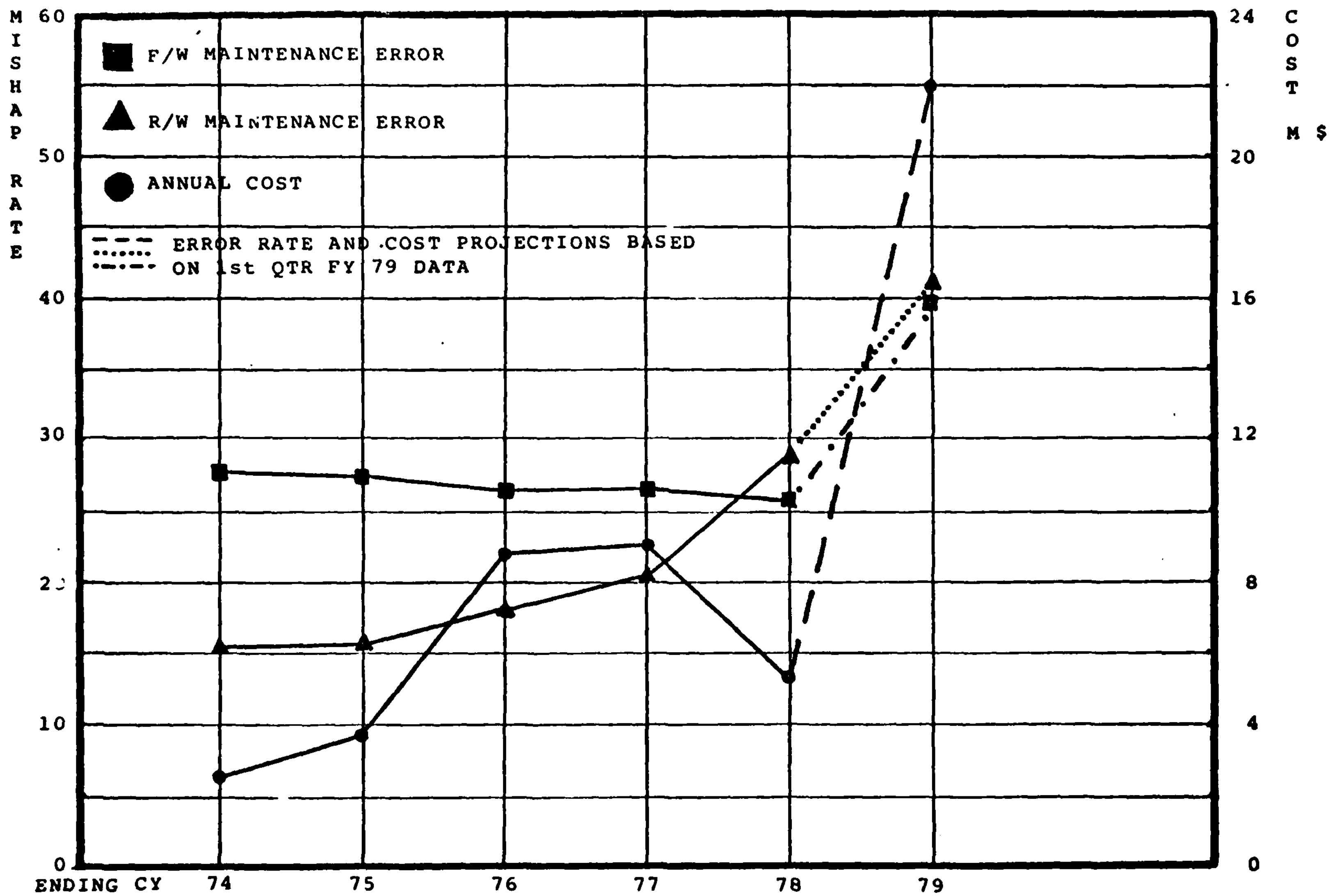


FIGURE 6-1

the fixed wing rate in 1974, has been increasing in an alarming manner and has now surpassed fixed wing rate.

An analysis of rotary wing rates reveals the following:

ROTARY WING MAINTENANCE ERROR MISHAP RATE
TREND LINE COMPARISON

Aircraft	1st Quarter CY 74	1st Quarter CY 79	Rate of Change
OH-58	8.0	27.0	+238%
UH-1	12.0	23.5	+ 96%
AH-1	49.0	68.0	+ 39%
CH-47	45.0	89.0	+ 98%

MAINTENANCE ERROR MISHAP RATE - 1ST Q CY 79
TREND LINE COMPARISON WITH OH-58 RATE

Aircraft	Rate	Difference from OH-58
OH-58	27.0	0
UH-1	23.5	-13%
AH-1	68.0	+152%
CH-47	89.0	+230%
F/W	28.0	+4%

Based on the above, it does not appear that the rate of change is a function of aircraft complexity; however, it does appear that the magnitude of maintenance error rate (except UH-1 aircraft) is closely associated with aircraft complexity.

Costs associated with maintenance error mishaps reflect similar trends.

MAINTENANCE ERROR MISHAP COSTS

YEAR	COST	PERCENT CHANGE FROM CY 74
CY 74	$2,625,904	-
CY 75	3,769,752	+43%
CY 76	8,935,341	+240%
CY 77	9,052,438	+245%
CY 78	5,258,394	+100%
1st Qtr CY 79	5,639,175	+759%
	$35,281,004	

*1st Quarter Cost Converted to Annual Cost.

COST DISTRIBUTION

	R/W	F/W	TOTAL
Damage Cost	68.8%	18.7%	87.5%
Injury Cost	9.0%	3.5%	12.5%
TOTAL	77.8%	22.2%	100.0%

APPROXIMATE MAINTENANCE ERROR MISHAP COST PER FLYING HOUR

Calender Year	Cost Per Flying Hour
74	$1.82
75	$2.71
76	$6.31
77	$6.18
78	$3.65
1st Q 79	$18.92
Aggregate CY 74-1st Q 79	$4.90*

*Approximately $7.83 per F/W and $4.43 per R/W flying hour.

The magnitude of maintenance error mishap costs and their upward trend presents a significant potential for cost avoidance. If maintenance error costs could have been stabilized at the CY 74 rate and using constant CY 74 dollars as a basis for comparison, an approximate savings of $19,192,337 could have been realized during the period. This could have provided an average of $4,515,844 annually during the CY 75 - 1st Quarter CY 79 period for funding additional training and retention incentives.

It is obvious that these data represent a significant loss of resources and degradation in unit readiness. These data appear even more alarming in view of the declining FW/RW accident rate during the same period (ANNEX B). The principles of command emphasis, technical supervision, technical proficiency, and adequacy of training and resources which have resulted in manageable aircraft accident rates appear essential in solving this problem. As a part of the total enlisted aviation maintenance problem, maintenance error rates are as anticipated and appear consistent with other findings. It is also felt that much of the materiel failure mishap rate, which is high and has increased approximately 21% during the period, is actually attributable to maintenance error (ANNEX C).

An attempt was made to analyze quarterly maintenance error rates in terms of periods of high and low flying hours and by favorable and adverse weather conditions (2d and 3rd quarters - April through September were considered generally good weather and 4th and 1st quarters - October through March to have generally adverse conditions). This was because of an opinion among many aviation maintenance personnel that periods of reduced flying means additional time to perform maintenance, sometimes unnecessarily, which means a greater propensity for maintenance error. These data are reflected in Table 6-1 and indicate a positive relationship between low flying hours and adverse weather conditions and a lesser relationship between maintenance error and low flying hours and maintenance error and adverse weather conditions. It is suggested that maintenance error rates are influenced by adverse weather conditions due to inherently less favorable working conditions, much in the same manner as these conditions influence accident probability.

CORRELATION BETWEEN PERIODS OF LOW
FLYING HOURS (FH) - ADVERSE WEATHER (ADV WX) -
HIGH MAINTENANCE ERROR MISHAP RATES (ME)

	R/W	F/W	AGGREGATE
Low FH Corresponds To ADV WX	6 of 6 100%	6 of 6 100%	12 of 12 100%
High ME Corresponds To Low FH	4 of 7 57%	4 of 6 67%	8 of 13 62%
High ME Corresponds To ADV WX	4 of 7 57%	5 of 6 83%	9 of 13 69%

TABLE 6-1

The Army Safety Center Study analyzed all maintenance error mishaps as to cause factor and who committed the errors. No attempt was made to determine specific system inadequacies that allowed the error. These data are summarized below:

AIRCRAFT MAINTENANCE ERROR

AIRCRAFT	MECHANIC	TECHNICAL INSP/ SUPERVISOR	OTHER	TOTAL ERRORS
UH-1	795 (79%)	179 (18%)	34 (3%)	1008 (41%)
OH-58	277 (56%)	208 (42%)	8 (2%)	493 (20%)
AH-1	242 (84%)	43 (15%)	2 (1%)	287 (12%)
CH-47/54	188 (65%)	89 (31%)	11 (4%)	288 (12%)
R/W TOTAL	1502 (72%)	519 (25%)	55 (3%)	2076 (8[illegible]%)
F/W TOTAL	288 (75%)	83 (22%)	11 (3%)	382 (15%)
AGGREGATE	1790 (73%)	602 (24%)	66 (3%)	2458 (100%)

NOTE: Number of maintenance errors exceeds number of maintenance error mishaps due to certain mishaps having more than one maintenance error.

This data does not reflect a significant variance between R/W and F/W aircraft. However, the magnitude of aggregate technical inspector/supervisor error (24%) as well as OH-58 (42%) and CH-47/54 (31%) technical inspector/supervisor error is significant. In that maintenance error mishap rates and associated costs have been increasing since CY 74, it suggests that possibly personnel in the "all volunteer" Army are receiving less training than provided during draft era. It is also possible that today's training is less effective; however, this requires consideration of trainability of today's accession, complexity of today's equipment, time spent performing aircraft maintenance tasks by today's repairer,

availability and technical qualification of today's supervisor, and adequacy of today's personnel management system. It would be an oversimplification to indict the training system when it appears equally true that force structure and personnel management have not adequately recognized today's environment.

The Army Safety Center Study on aircraft maintenance error mishap experience provides a valuable insight into aircraft maintenance problems and an additional tool for resolution of these problems. Changes did occur in aircraft accident reporting and investigating procedures during the period covered by the study; however, they are not deemed to have influenced study results. Possible inconsistencies are presented between high but relatively stable F/W error rates and rapidly increasing R/W rates; however, it is felt that this is partially explained by the significantly higher first term retention of MOS qualified F/W personnel (MOS 67G) and by the conditions which contribute to the relatively high first term reenlistment rate. It is felt that current maintenance error mishap rates are unacceptably high, represent a significant annual loss of resources, and that the upward trend for R/W rates will continue in absence of specific corrective action.

As to specific causes, it is felt that factors such as adequacy of initial and skill development training, technical inspector identification and qualification, adequacy of repairer and supervisor authorizations and fill levels, retention of critical skills, adequacy of maintenance publications, and adequacy of working conditions are collectively the primary cause factors. These conclusions are supported by other findings of the CMF 67 study. The importance of any one factor has not been determined. It is felt that collectively the current enlisted aviation maintenance force structure and the training and personnel management systems are not adequately preparing today's soldier to perform and survive on tomorrow's battlefield.

C. FINDINGS.

(1) Army aircraft mishaps caused by maintenance error resulted in a significant resource loss - $35,281,004, 39 fatalities, and 130 injuries during the CY 74 - 1st quarter CY 79 period.

(2) The rotary wing aircraft maintenance error mishap rate increased by 146% during the CY 74 - 1st quarter CY 79 period.

(3) A significant portion of maintenance errors were committed by technical inspectors and supervisors - 24%.

(4) Maintenance errors have a significant impact upon sustained unit readiness.

D. RECOMMENDATIONS.

(1) Continue analysis of aviation maintenance error mishap rates as to specific cause factors and make greater usage of this data in the overall management of aviation maintenance and maintenance training.

(2) Approve associated recommendations of this study which impact upon enhanced training, personnel management, and force structure.

3. AIRCRAFT MAINTENANCE.

A. BACKGROUND. As noted in the introductory paragraph to this Chapter, current aviation maintenance capabilities are heavily influenced by the aggregate implications of force structure, training, and personnel management. This study has found that the organizational structure contains significant deficiencies; the MOS/CMF structure lacks grade sustainability and contains features which preclude effective management, training, and utilization of resources; the retention of aviation maintenance personnel beyond their first enlistment is poor; the aviation maintenance training program lacks effective management and does not adequately meet unit or individual needs; and that aircraft mishaps caused by maintenance errors are increasing and represent a significant loss of resources. Each of these are contributing to varying degrees, to a less than effective aviation maintenance program. Under current training philosophy, trainees are provided a certain number of critical skills in the training base and then sent to units where they are expected to receive enough additional training to finish MOS qualification. For example, 29% of critical Skill Level 1-3 tasks for 67-Series MOS are to be taught in school with 71% being the responsibility of the unit. Imposition of a significant SOJT burden on aviation units without adequate personnel assets to accomplish the job appears unrealistic in that aviation unit missions require flyable aircraft, whether at war or peace. The pressures of providing flyable aircraft is often achieved at the expense of a comprehensive training program with a consequent lowering of the technical knowledge of the maintenance force.

B. DISCUSSION.

(1) GENERAL. A recurring theme during this study has been the need for an effective distribution of duties to the various MOS, an effective MOS structure which supports the performance of these tasks, an organizational structure which provides sufficient resources for mission accomplishment, and a training program which ensures that operators, maintainers, and supervisors at all levels receive the maintenance training required of their job assignments. To achieve substantive improvement in aviation maintenance requires corrective action in the areas of training, personnel management, resource allocation, maintenance management, and command emphasis. It also requires an explicit recognition of total mission requirements to ensure that resource allocation is consistent with requirements. As noted

previously, it would appear that the magnitude of the training mission was not considered when developing the current organizational structure. An Air Cavalry Troop with personnel authorizations in 22 different MOS and 9 different CMF (5 of which have no E6 or E7 authorizations), entails a major SOJT requirement. An effective SOJT program cannot exist without effective management, sufficient technically qualified first-line supervisors, and dedicated time.

Other factors bearing on aviation maintenance effectiveness include manpower authorizations (MACRIT) and manpower utilization. Attempts to validate manpower authorizations provided under AR 570-2 were unsuccessful (See Chapter 3, Section 4 and Annex E this Chapter). However, it is the opinion of this study that current aviation maintenance MACRIT factors fail to adequately recognize aviation maintenance requirements and capabilities of newly trained personnel. Attempts to determine what percentage of an aircraft mechanics duty day was being spent performing aircraft maintenance were also unsuccessful. However, it is believed that Army Audit Agency (1976 Study), General Accounting Office (1975 Study), and Logistics Management Institute (1977 Study) estimates of Army military mechanic utilization, which range from 15 to 26 percent, are applicable to aviation maintenance personnel. If these estimates are valid, and it would appear that the preponderance of the maintenance time lost is beyond the control of the unit commander, it has a significant impact upon maintenance capabilities and upon the acquisition and retention of aviation maintenance skills. Low mechanic utilization precludes an effective SOJT program and adversely impacts upon the reinforcement of school acquired skills. The high rate of aircraft readiness appears inconsistent with other findings of this study. In view of the extensive SOJT requirement for AIT graduates, organizational and MOS structural deficiencies, shortages of key maintenance personnel, apparent low utilization of mechanics, high personnel turnover rate, low first term retention rates, increased equipment complexity, and increasing maintenance error mishap rates; it is felt that aircraft readiness, and especially sustained readiness, is significantly less than reported. This is deemed to result, not from intentional erroneous reporting, but rather from a lack of necessary technical qualifications on the part of personnel making or contributing to equipment availability assessments.

It is felt that the concept of Chapter 3, Section 3 (Future Maintenance Structures) has significant potential impact upon future aviation maintenance effectiveness. Improved training and improved personnel management procedures will not in themselves adequately compensate for an ineffective organizational structure. As noted earlier, this factor becomes increasingly more important with the introduction of new, more complex equipment because of generally enhanced RAM characteristics and reduced MACRIT factors.

(2) MAINTENANCE OF AVIATION LIFE SUPPORT EQUIPMENT (ALSE). Concern over ALSE duties and who performs these duties constitute a long standing, frequently emotional, and unresolved problem. The CMF 67 study was tasked with review of a proposal to establish an ALSE MOS (68()XX). Results of this review indicated a need for an improved ALSE program; however, the proposal contained insufficient information to permit problem resolution. Essential to resolution of the ALSE problem is a thorough job and task analysis of ALSE duties, identification of who should perform these duties, correlation of these duties with existing training programs and MOS duty specifications, development of valid training requirements, validation of overall manpower requirements, development of a viable MOS structure and SGA, and identification of source for additional manpower requirements. The Study Group is unable to provide more substantive data pending resolution of the issues noted above. Additional data regarding the proposed ALSE MOS is included at ANNEX D.

C. FINDINGS.

(1) The overall Army Aviation Maintenance Program lacks effective management. Deficiencies reflect aggregate shortcomings of the personnel management system, aviation maintenance training, and force structure.

(2) The tasks required of aviation maintenance personnel exceed the capabilities provided by the current training program.

(3) The skill development of enlisted aviation maintenance personnel is hindered by requirements to perform non-maintenance related duties.

(4) The organization for aviation maintenance, particularly at AVUM level, does not contribute to an effective maintenance program.

(5) The study was unable to validate current MACRIT data; however, it is felt that manpower authorization criteria for CMF 67 personnel do not adequately recognize field conditions.

(6) The reported high state of unit readiness and equipment availability is in contradiction with findings pertaining to training, personnel management, and force structuring.

(7) The maintenance of aviation life support equipment (ALSE) remains an unresolved issue.

D. RECOMMENDATIONS.

(1) Establish responsibility for development and implementation of a program to improve Army aviation maintenance.

(2) Validate MACRIT for CMF 67 based upon actual field/experience and requirements.

ANNEX A

STUDY OF ARMY AIRCRAFT MAINTENANCE-ERROR MISHAP EXPERIENCE

NOTE:

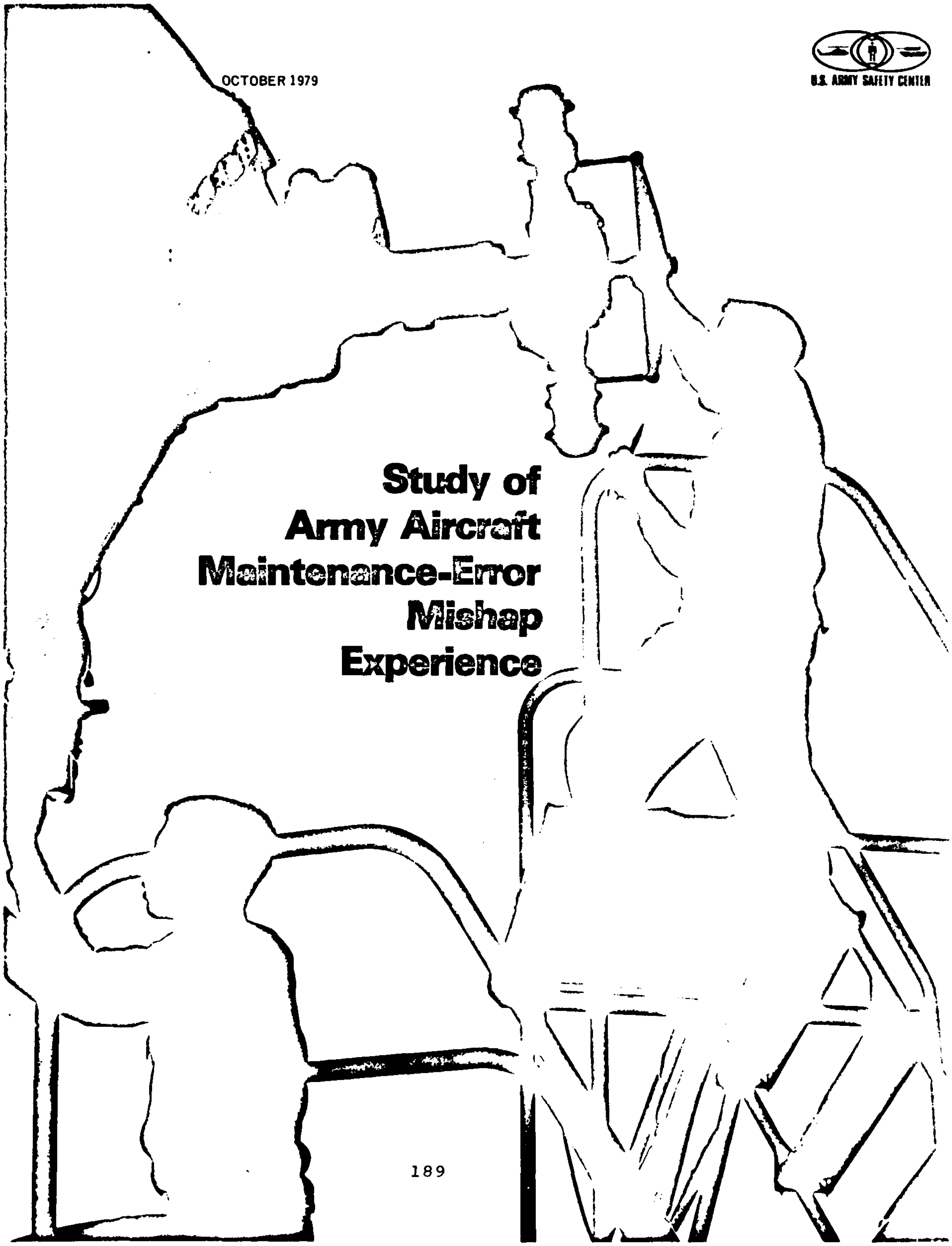
1. The CMF 67 study group owes a special debt of gratitude to the US Army Safety Cener, Fort Rucker, Alabama for their assistance. During the course of the study, assistance and data was received from many sources; however, no one was more responsive or more conscientious in their attempts to assist than the US Army Safety Center. Personnel assisting in the compilation of data are noted at the end of Annex A.

2. It should also be noted that findings and recommendations of Chapter 6, Section 2 are those of the CMF 67 study and may not necessarily be concurred with by the US Army Safety Center.

3. Page 7, Annex A, reflects combined CH-47/54 data. This data is provided on separate charts at the end of Annex A.

OCTOBER 1979

U.S. ARMY SAFETY CENTER



Study of Army Aircraft Maintenance-Error Mishap Experience

Study of Army Aircraft Maintenance-Error Mishap Experience

Contents

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Army Aircraft Maintenance Error Mishap Experience
1 January 1974 through 31 March 1979

Introduction

This report was prepared to aid aviation resource managers, commanders, aviation safety officers, and maintenance personnel in the prevention of aircraft mishaps caused by maintenance errors.

This report is based on an analysis of maintenance-caused mishaps for each Army aircraft (except the TH-55 and OH-6). Data reflects combined Active Army, Army Reserve, and Army Guard maintenance error mishap experience from 1 January 1974 through 31 March 1979. Mishap categories are defined in AR 385-40. Rates presented in this report represent maintenance error mishap rates only and are determined using the formula (mishap experience × 100,000) ÷ flying hours. Statistics are subject to minor change as a result of mishap reclassification.

Summary

Maintenance errors caused or contributed to 21.6% of all Army aircraft accidents for this period. The maintenance-related mishap trend increased steadily throughout the period, primarily as a result of rotary wing mishaps. It is suspected that many mishaps recorded as being caused by materiel failure were, in fact, caused by maintenance error. The upward maintenance mishap trend can be reversed. Major areas affecting the quality of maintenance, such as training, technical manuals, and personnel (number of authorized personnel in relation to actual strength and structure of duty positions) should be evaluated to determine ways and means for improvement.

TABLE 1.—Total Aviation Mishap Versus Maintenance Mishap Experience 1 January 1974-31 March 1979

Classification	Aviation Mishaps	Maintenance-Related Mishaps	Percent of Total Mishaps With Maintenance-Related Causes
Accident	426	92	21.6
Incident	1,112	186	16.7
Forced Landing	586	85	14.5
Prec. Landing	12,403	1,214	9.8
Other	205	86	42.0
Total	14,732	1,663	11.3
Losses			
Damage Cost	$86.9M	$30.0M	34.5
Injury Cost	$20.7M	$4.3M	20.8
Total Cost	$107.6M	$34.3M	31.9
Fatalities	172	39	22.7
Injuries	472	130	27.5

NOTE: A maintenance mishap matrix by type aircraft, mishap classification, and losses is located at Appendix A.

Discussion

A total of 14,732 aviation mishaps occurred during the period 1 January 1974 through 31 March 1979. Maintenance cause factors were present in 1,663 mishaps. Although this was only 11.3% of all mishaps, maintenance error was involved in 21.6% of the accidents, 16.7% of the incidents, and 14.5% of the forced landings. Significant losses (dollars, injuries, fatalities) associated with maintenance error mishaps reflect the severity of those mishaps.

A comparison was made of rotary wing versus fixed wing maintenance error mishaps. The fixed wing maintenance error accident rate (1.4) was slightly higher than the rotary wing rate (1.3). Table 2 shows a rotary wing accident to forced landing ratio of almost 1:1 and a fixed wing ratio of 7:1. Eight of the 14 fixed wing accidents were total losses. The severity of those accidents resulted in disproportionately higher losses in dollars and fatalities.

TABLE 2.—Fixed Wing/Rotary Wing Maintenance Mishap Experience
1 January 1974-31 March 1979

Classification	Rotary Wing	Fixed Wing	Total
Accident	78	14	92
Accident Rate	1.3	1.4	1.3
Incident	160	26	186
Forced Landing	83	2	85
Prec. Landing	1,003	211	1,214
Other	67	19	86
Total	1,391	272	1,663
Losses			
Damage Cost	$23.6\bar{M}$	$6.4\bar{M}$	$30.0\bar{M}$
Injury Cost	$3.1\bar{M}$	$1.2\bar{M}$	$4.3\bar{M}$
Total Cost	$26.7\bar{M}$	$7.6\bar{M}$	$34.3\bar{M}$
Fatalities	28	11	39
Injuries	124	6	130

NOTE: R/W Flying Hours – 6.2$\bar{M}$ (86%)
F/W Flying Hours – 1.0$\bar{M}$ (14%)

The maintenance error mishap trend graph shows that while fixed wing mishap rates have varied from quarter to quarter, the overall trend has remained constant. However, the rotary wing mishap rate, approximately half that of the fixed wing rate in 1974, has steadily increased and has surpassed the fixed wing rate.

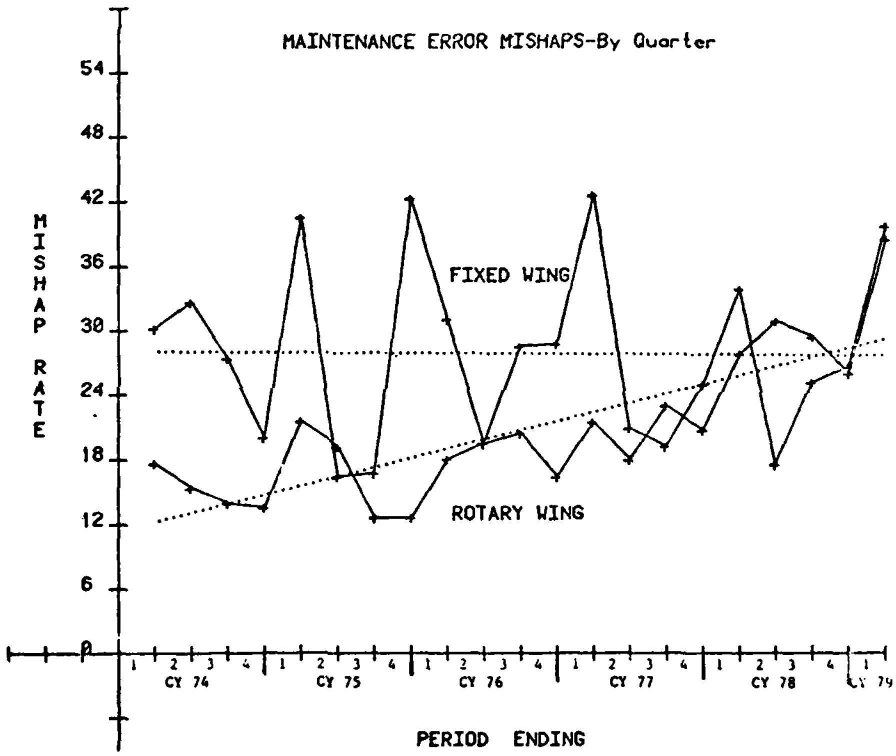
Maintenance error mishaps are increasing for all types of rotary wing aircraft. Trend line graphs for specific types of rotary wing aircraft are carried in appendix C. In comparing rates between aircraft, it must be recognized that the mishap rate scales vary for each trend graph.

All 1,663 maintenance error mishaps were analyzed on a case-by-case basis to determine maintenance task errors—and who committed the errors—that

caused or contributed to the mishaps. The results of this analysis are provided in matrices at appendix D. No attempt has been made in this report to determine specific system inadequacies that allowed the task error. A mechanic who overtorqued a line that eventually broke and caused a mishap may have used improper torquing procedures for many reasons. His initial aviation MOS training in torquing procedures may have been deficient, or a properly calibrated torque wrench may not have been available so that he could do the job correctly. Managers and supervisors of maintenance personnel at all levels should review the cause factor matrices in light of their unique operating environments to determine system inadequacies and corrective actions.

Selected aviation maintenance error mishap briefs are carried in appendix E.

A ground mishap (DA Form 285) matrix is in appendix F. Mishaps involved maintenance personnel performing maintenance-related tasks during duty hours.

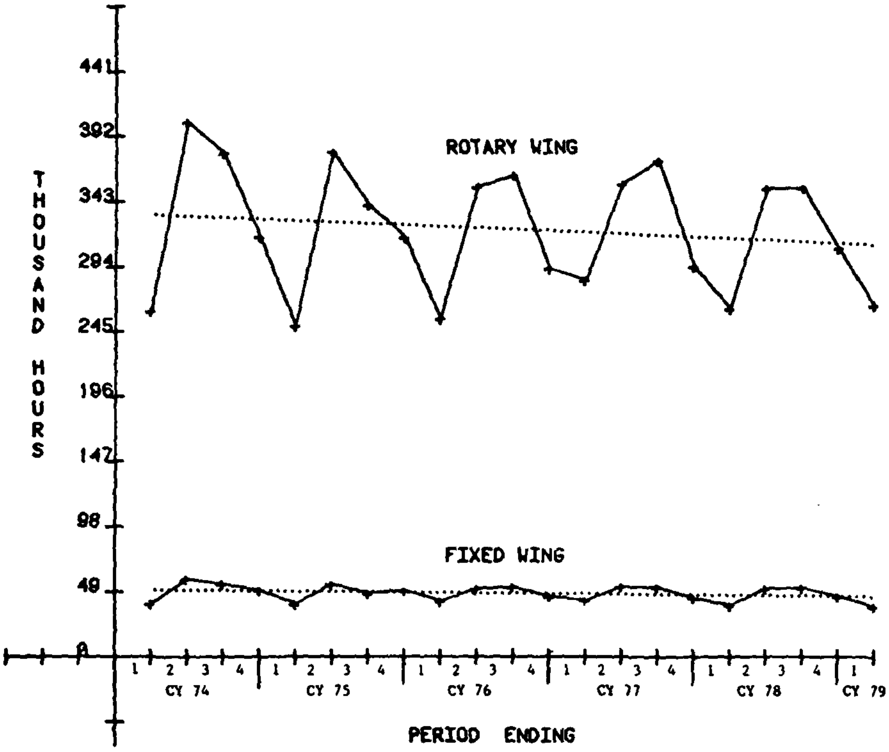


NOTE: Marked variations in the fixed wing quarterly rates are caused by the relatively low number of fixed wing flight hours and maintenance mishaps over the 21-quarter period. A flying hour trend chart has been provided at appendix B.

Appendix A
Maintenance Mishap Matrix
1 Jan 74-31 Mar 79

	MISHAP CLASSIFICATION								INJURIES		COSTS	
TMS Fixed Wing	**T/L**	**Maj**	**Min**	**Inc**	**F/L**	**P/L**	**Other**	**Total Mishaps**	**Fatal**	**Nonfatal**	**Injuries**	**Damage**
C-7						3		3				
C-12						15	1	16				$300
C-45				1		1		2				$300
C-47						2		2				
C-54						2		2				
O-2						1		1				
OV-1	2			13		35	4	54	2	2	$170,000	$2,158,473
RV-1	1					2		3		1	$1,390	$3,303,817
T-28						2		2				
T-41						7		7				
T-42		1		2	1	29		33				$37,814
U-3	1		1	1		8		11		2		$63,060
U-4			1					1				$5,770
U-8	3		2	3	1	51	2	62	2	1	$200,000	$430,281
U-9			1					1				$2,228
U-10						1		1				
U-21	1			6		52	12	71	7		$795,000	$360,537
Total	8	1	5	26	2	211	19	272	11	6	$1,166,390	$6,362,580
Rotary Wing												
AH-1	5	6	2	22	7	173	17	232	1	18	$77,335	$5,175,492
CH-47		1	1	39	3	133	8	185	1	6	$68,555	$4,043,518
CH-54	1			1	1	11	1	15	2	2	$225,000	$3,026,266
OH-58	8	14		22	32	163	23	262	4	14	$531,675	$1,670,727
TH-1						10		10				
UH-1	17	18	5	76	40	513	18	687	20	84	$2,254,300	$9,723,082
Total	31	39	8	160	83	1,003	67	1,391	28	124	$3,156,865	$23,639,085
Total	**39**	**40**	**13**	**186**	**85**	**1,214**	**86**	**1,663**	**39**	**130**	**$4,323,255**	**$30,001,665**

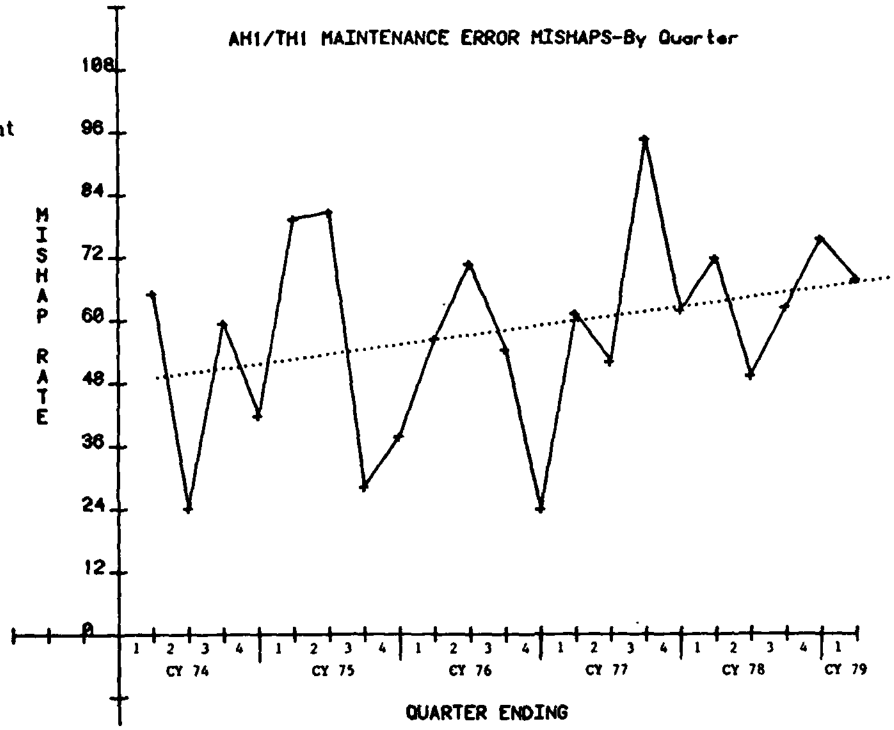
Appendix B
Aircraft Flying Hours by Quarter

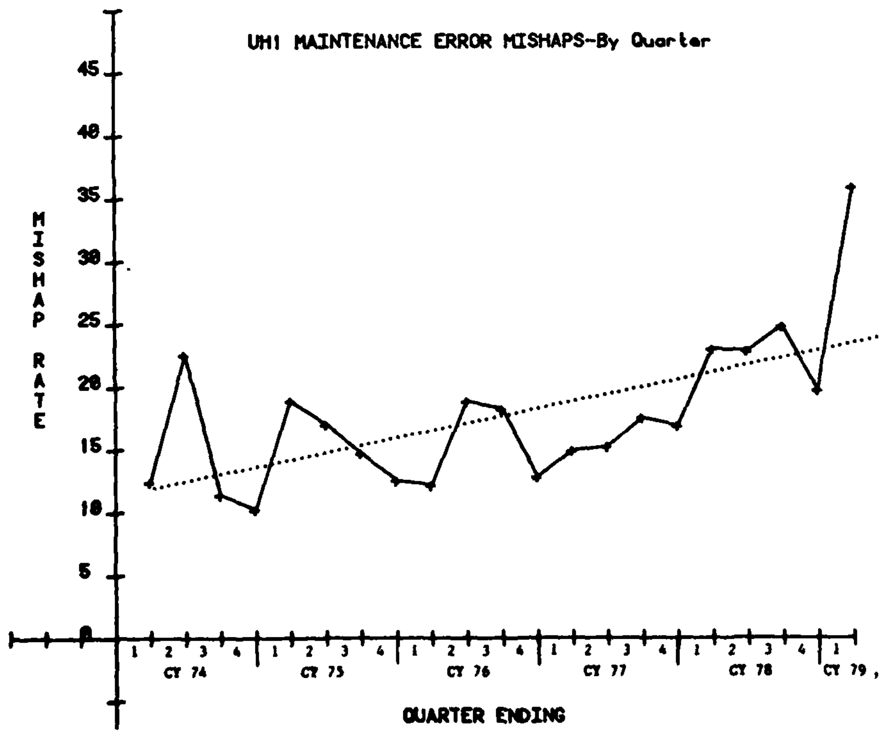


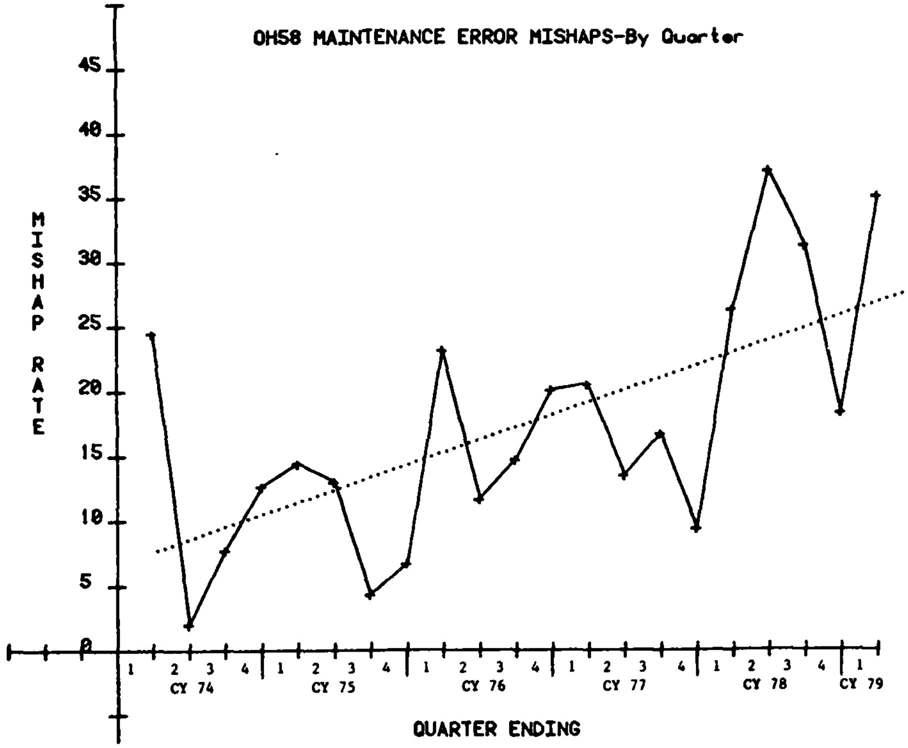
Total rotary wing hours = 6.2M̄ (86%)
Total fixed wing hours = 1.0M̄ (14%)

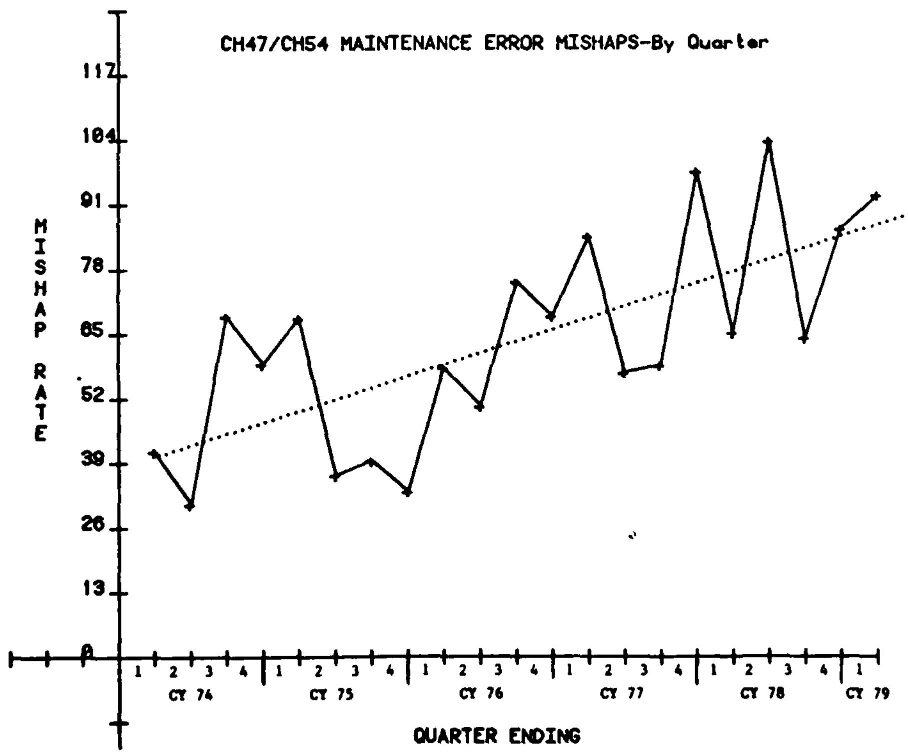
Appendix C
Maintenance Error Trend Graphs by Type Aircraft

In comparing maintenance error trends, consider that each aircraft has a different mishap rate scale.






OH58 MAINTENANCE ERROR MISHAPS-By Quarter
MISHAP RATE
45
40
35
30
25
20
15
10
5
0
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1
CY 74
CY 75
CY 76
CY 77
CY 78
CY 79
QUARTER ENDING


CH47/CH54 MAINTENANCE ERROR MISHAPS-By Quarter
MISHAP RATE
117
104
91
78
65
52
39
26
13
0
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1
CY 74
CY 75
CY 76
CY 77
CY 78
CY 79
QUARTER ENDING

Appendix D
Maintenance Error Matrices by Type Aircraft

FIXED WING AIRCRAFT MAINTENANCE ERRORS
1 January 1974-31 March 1979
(Total Mishaps: 272)

Cause Factors	CMF 67 Mechanic	CMF 67 Tech Inspector	Avionics/ Electrician	Maintenance Supervisor	Other Support Personnel*
1. Improper ground handling, towing, pushing and equipment, ground support.	5	0	0	2	1
2. Tools left in aircraft.	1	0	0	0	0
3. Improper torque.	17	3	0	0	0
4. Improper wiring procedures that resulted in frayed, broken wires, shorts, and loose cannon plugs.	21	2	5	0	0
5. Improper inspection procedures used IAW publications.	5	1	0	0	2
6. Improper lubrication (lack of, wrong type components).	3	0	0	0	0
7. Improper installation and routing of fluid, pneumatic lines (includes O-rings and seals).	48	9	0	2	1
8. Ignition system malfunctions caused by maintenance.	3	0	0	0	0
9. Improper voltage regulator adjustments and battery service.	2	2	0	0	0
10. Improper cleaning procedures, engine, airframe and components.	4	0	0	0	0
11. Landing gear switches out of adjustment and improperly installed.	46	6	0	0	0
12. Landing gear malfunctions caused by maintenance (actuators, retract components and doors, and leakage.	34	17	1	6	0
13. Propeller damage due to improper maintenance.	4	1	0	1	0
14. Loose fuel and oil caps and not properly sealed.	16	2	0	0	0
15. Improper fuel control, fuel injector pump, and carburetor installation and adjustment induction system.	10	5	0	1	0
16. Throttle control, prop control, mixture control, cables and linkage, adjustment, lubrication and installation.	19	10	0	0	0
17. Maintenance-induced FOD to engines and components.	4	0	0	0	1
18. Doors, windows improperly installed or secured.	6	1	0	0	5
19. Cowling and inspection panels improperly secured.	12	1	0	5	1
20. Improper maintenance on engine, prop governor, and prop.	15	2	0	2	0
21. Flight controls, maintenance, adjustment, and inspection.	4	1	0	0	0
22. Improper fuel and oil service.	2	0	0	1	0
23. Fuel drop tanks improperly installed.	1	0	0	0	0
TOTAL	282	63	6	20	11

*Depot maintenance, ground, fuel, tech observer

The number of maintenance errors committed will exceed the number of maintenance-related mishaps because a mishap can be the result of two or more maintenance errors, e.g., mechanic and technical inspector.

UH-1 AIRCRAFT MAINTENANCE ERRORS
1 January 1974-31 March 1979
(Total Mishaps: 687)

Cause Factors	CMF 67 Mechanic	CMF 67 Tech Inspector	Avionics/ Electrician	Maintenance Supervisor	Other Support Personnel*
1. Improper torque.	84	6	0	2	0
2. Improper wiring procedures that resulted in frayed, broken wires, shorts, and loose cannon plugs.	58	2	1	0	0
3. Improper fuel controls, overspeed govemor, VIGV actuator, bleed band adjustments.	61	14	0	3	1
4. Loose cannon plugs and coaxial cables jamming flight controls.	1	0	0	0	0
5. Improper inspection procedures.	182	30	2	8	2
6. Improper installation and routing of fluid, pneumatic lines (including O-rings and seals).	119	14	0	5	1
7. Improper voltage and regulator adjustments and battery servicing.	68	5	3	1	0
8. Insufficient lubrication.	22	2	0	1	0
9. Contaminated fluids.	4	0	0	0	2
10. Maintenance-induced FOD to engines and components.	58	4	0	5	18
11. Improper engine cleaning procedures.	12	0	0	5	0
12. Incorrectly installed bearings.	4	3	0	0	0
13. Improperly manufactured fluid lines.	1	1	0	1	0
14. Tools left in aircraft.	12	5	0	0	0
15. Components removed but not written up.	1	0	0	1	0
16. Chip detectors installed improperly.	12	0	0	0	0
17. Improper assembly of tail rotor control system and tail rotor assembly.	23	18	0	2	0
18. Improper installation of intemal main transmission filter gasket.	10	4	0	0	0
19. Improper assembly at depot or GS level.	6	2	0	1	0
20. Improper adjustment to flight idle stop/solenoid.	14	9	0	1	0
21. Inadequate direction and blade clearance.	15	0	0	4	9
22. Improper engine assembly/maintenance.	8	5	0	1	0
23. Improper fueling procedures.	1	0	0	0	0
24. Improper assembly of main drive shaft, flex coupling and tail rotor drive shaft.	3	2	0	1	0
25. Improper maintenance procedures.	10	5	0	6	1
TOTAL	789	131	6	48	34

***Depot maintenance, ground, fuel, tech observer**

OH-58 AIRCRAFT MAINTENANCE ERRORS
1 January 1974-31 March 1979
(Total Mishaps: 262)

Cause Factors	CMF 67 Mechanic	CMF 67 Tech Inspector	Avionics/ Electrician	Maintenance Supervisor	Other Support Personnel*
1. Improper torque.	53	14	0	14	3
2. Improper wiring procedures that resulted in frayed, broken wires, shorts, and loose cannon plugs.	27	7	10	6	0
3. Improper fuel controls, overspeed governor, VIGV actuator, bleed band adjustments.	25	11	0	9	0
4. Loose cannon plugs and coaxial cables jamming flight controls.	12	6	0	6	0
5. Improper inspection procedures.	38	24	0	22	0
6. Improper installation and routing of fluid, pneumatic lines (including O-rings and seals).	13	5	0	5	0
7. Improper voltage regulator adjustments and battery servicing.	9	0	0	0	0
8. Improper adjustment of linear actuator.	3	0	0	0	0
9. Insufficient lubrication.	12	2	0	2	0
10. Contaminated fluids.	11	4	0	6	1
11. Maintenance-induced FOD to engines and components.	47	17	0	25	3
12. Improper engine cleaning procedures.	3	1	0	1	0
13. Incorrectly installed bearings.	2	3	0	1	1
14. Improperly manufactured fluid lines or pneumatic lines.	5	4	0	4	0
15. Chip detectors installed improperly.	2	1	0	1	0
16. Improper assembly of tail rotor control system and tail rotor assembly.	5	5	0	2	0
TOTAL	267	104	10	104	8

*Depot maintenance, ground, fuel, tech observer

AH-1/TH-1 AIRCRAFT MAINTENANCE ERRORS
1 January 1974-31 March 1979
(Total mishaps: 242)

Cause Factors	CMF 67 Mechanic	CMF 67 Tech Inspector	Avionics/ Electrician	Maintenance Supervisor	Other Support Personnel*
1. Improper torque.	49	0	0	0	0
2. Improper wiring procedures that resulted in frayed, broken wires, shorts, and loose cannon plugs.	12	0	1	1	0
3. Improper fuel controls, overspeed governor, VIGV actuator, bleed band adjustments.	12	0	0	0	0
4. Loose cannon plugs and coaxial cables jamming flight controls.	4	1	0	0	0
5. Improper inspection procedures.	34	32	0	4	0
6. Improper installation and routing of fluid, pneumatic lines (including O-rings and seals).	56	0	0	0	0
7. Improper voltage regulator adjustments and battery servicing.	5	0	0	0	0
8. Improper adjustment of linear actuator.	1	0	0	0	0
9. Insufficient lubrication.	4	0	0	0	1
10. Contaminated fluids.	3	1	0	0	0
11. Maintenance-induced FOD to engines and components.	7	0	0	0	0
12. Improper engine cleaning procedures.	7	0	0	0	0
13. Incorrectly installed bearings.	1	0	0	0	1
14. Improperly manufactured fluid lines.	2	0	0	0	0
15. Tools left in the aircraft.	6	1	0	1	0
16. Components removed but not written up.	1	0	0	0	0
17. Chip detectors installed improperly.	5	0	0	0	0
18. Improper assembly of tail rotor control system and tail rotor assembly.	10	0	0	0	0
19. Improper installation of internal main transmission filter gasket.	4	0	0	0	0
20. Improperly installed ECU ducting	1	0	0	0	0
21. Maintenance-induced armament mishaps.	8	0	0	1	0
22. Maintenance-induced SCAS mishaps.	4	0	0	0	0
23. Improper assembly at depot/factory.	4	1	0	0	0
24. Improper adjustment of flight idle stop.	1	0	0	0	0
TOTAL	241	36	1	7	2

*Depot maintenance, ground, fuel, tech observer

CH-47/CH-54 AIRCRAFT MAINTENANCE ERRORS
1 January 1974-31 March 1979
(Total mishaps: 200)

Cause Factors	CMF 67 Mechanic	CMF 67 Tech Inspector	Avionics Electrician	Maintenanc Supervisor	Other Support Personnel*
1. Improper torque.	27	6	0	2	0
2. Improper wiring procedures that resulted in frayed, broken wires, shorts, and loose cannon plugs.	9	4	10	0	0
3. Improper fuel controls, overspeed governor, VIGV actuator, bleed band adjustments.	6	4	0	0	0
4. Improper inspection procedures.	16	1	1	6	6
5. Improper installation and routing of fluid, pneumatic lines (including O-rings and seals).	42	20	0	2	0
6. Improper adjustment of linear actuator.	1	0	0	0	0
7. Insufficient lubrication.	10	0	0	7	0
8. Contaminated fluids	2	0	0	1	0
9. Maintenance-induced FOD to engines and components.	3	0	0	1	0
10. Improper engine cleaning procedures.	1	0	0	1	0
11. Incorrectly installed bearings.	1	0	0	0	0
12. Improperly manufactured fluid lines.	1	0	0	0	0
13. Tools left in the aircraft.	1	0	0	1	0
14. Chip detectors installed improperly.	2	2	0	0	0
15. Insufficient cargo handling and tie-down, slingload.	11	0	0	6	0
16. Improper power plant maintenance.	2	2	0	1	1
17. Rotor and transmission, blade stops, phasing, maintenance.	8	5	0	2	2
18. Maintenance-induced SCAS mishaps.	2	1	1	0	0
19. Improper assembly at depot/factory.	0	0	0	0	2
20. Improper adjustment of flight idle stop.	2	1	0	1	0
21. Engine oil filter improperly installed.	6	3	0	1	0
22. Failure to secure oil filler cap.	2	0	0	0	0
23. Improper hatch, door, and window maintenance and adjustment.	19	5	2	3	0
TOTAL	174	54	14	35	11

*Depot maintenance, ground, fuel, tech observer

Appendix E
Selected Mishap Briefs

With an IP, pilot, and three passengers on board, the U-8F lifted off on an IFR administrative training mission. At about 6,000 feet msl, the No. 1 engine fuel pressure began to fluctuate, and the IP switched the fuel selector from the "AUX" to "MAIN" position with fuel boost pump on. However, when fuel pressure continued to decrease, the IP called approach control and declared an in-flight emergency.

Cleared for an ILS approach under weather conditions of 300-foot ceiling and 3 miles visibility, the IP began his descent. Just before touchdown, the left engine and wing area burst into flames. The IP successfully landed and all passengers and crewmembers exited the aircraft with no injuries. Firefighters promptly extinguished the blaze which caused major damage to the left wing and flap area.

Loss of fuel pressure and subsequent fire resulted from failure of the elbow fitting between the fuel strainer and the drain valve.

Failure of the fitting was caused by improper installation of the fuel filter which was installed approximately seven-eighths of an inch off center. This resulted in misalignment of the drain line in the engine cowl access hole. Over a period of time, abnormal side-loading stresses imposed on the line caused failure of the drain line fitting.

The aircraft had been inspected many times after the fuel filter was improperly installed without the discrepancy being detected. ■

A UH-1 crew noticed a vibration in the rotor system and loss of engine power during cruise flight at about 10,500 feet msl. Collective was reduced and rpm was restored. As the pilot was trying to land in a clear area, severe airframe vibrations occurred, followed by compressor stall and engine failure, forcing the pilot to autorotate into 60- to 75-foot-high trees. The aircraft came to rest on its right side, caught fire, and was destroyed. One of the four occupants sustained serious injuries and had to be carried from the wreckage.

Engine failure and airframe vibrations resulted from improper closure rate of the bleed band. History of the aircraft showed that 17 DER checks indicated an average increase of 23° C. in corrected egt, with no corrective maintenance action having been taken. In addition, the maintenance section did not have change 7 to TM 55-2840-229-24 which requires establishment of a base line TEAC. Although improper operation of the bleed band was noted during a test flight and entry made on the check sheet, no maintenance action was taken to determine the cause and correct the problem. ■

About 45 minutes after takeoff, an AH-1G crew noted lateral vibrations at a reduced power setting of 10-15 pounds torque. Shortly afterwards, vibration recurred, but when the pilot reduced power from 32 pounds torque to approximately 15, the vibration subsided. When the pilot reapplied torque to 32 pounds, the airframe shuddered violently, and the aircraft yawed right and rolled left. The pilot diagnosed the problem as tail rotor failure and entered autorotation from approximately 1,200 feet msl.

The aircraft touched down with the skids almost perpendicular to furrows about 10 inches deep and continued to turn to the right. The skids caught on the furrows, causing the cross tubes to break, and the aircraft rolled left. The main rotor blades hit the ground, breaking the transmission off at the top portion of the support base. The AH-1 then came to rest on its left side and the pilots exited with no injuries.

Investigation revealed the self-locking nuts were reused during installation of the tail rotor gearbox and the nuts were not properly torqued, causing in-flight separation of the gearbox assembly from the aircraft. ■

An OH-58 engine lost power and the pilot established an autorotative descent, turning the aircraft toward a clear area surrounded by trees. The pilot applied collective pitch to clear the last stand of trees and started his deceleration but had to reapply collective to clear a fence. He then used remaining collective for cushion. However, because of low rpm, the aircraft lost lift at about 2 to 3 feet and settled hard, slightly nose high, causing one main rotor blade to flex and sever the tail boom aft of the horizontal stabilizer.

Loss of engine power resulted from loose fittings on pneumatic lines between the fuel control unit and the power turbine governor. ■

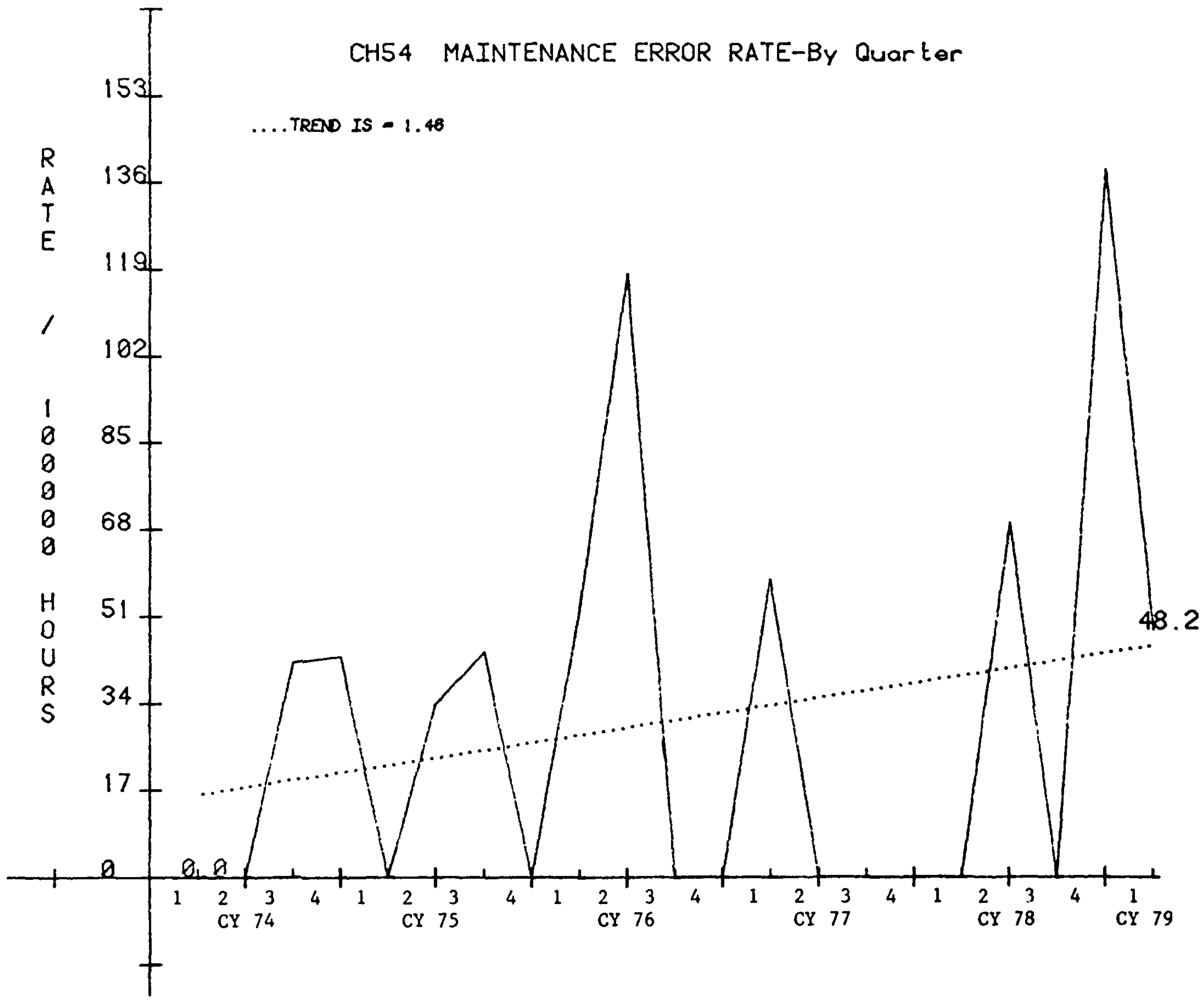
Appendix F
DA Form 285 Ground Mishaps

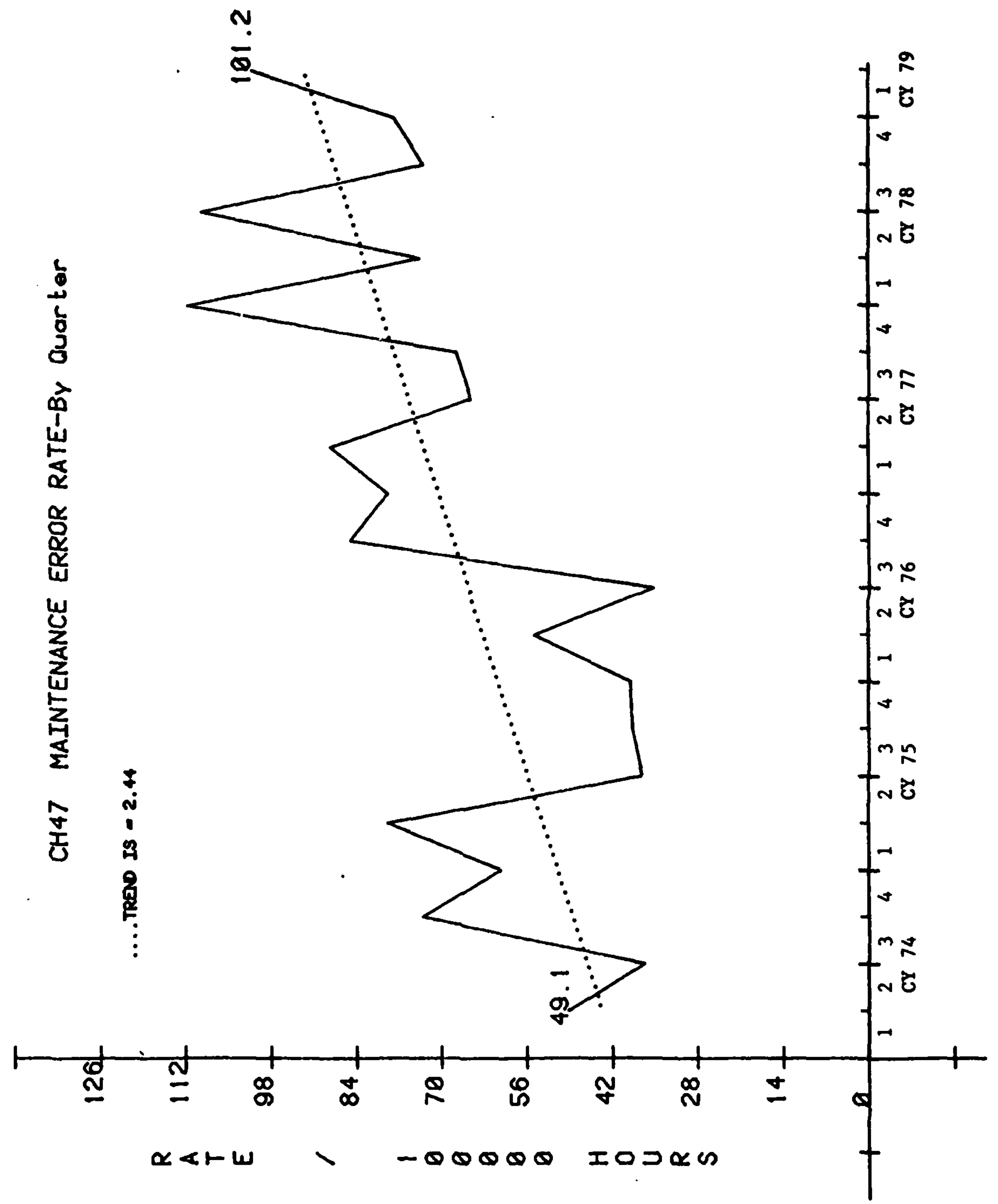
Total Mishaps: 306
Cost: $676,867
Fatalities. 1

Type	CMF 67/68 Mechanic	Inspection/Supervision	Other
1. Ground and cargo handling.	109	89	2
2. Improper maintenance procedures.	128	117	1
3. Refueling/defueling operational error.	7	2	0
4. Improper inspection procedures.	8	6	0
5. Fuel system maintenance improper.	5	4	0
6. Falls during maintenance.	37	2	2
7. Materiel failure.	1	1	9
8. Other.	2	3	1
TOTAL	297	224	15

NOTE: Mishaps involved maintenance personnel performing maintenance-related tasks during duty hours.

CH54 MAINTENANCE ERROR RATE-By Quarter




CH47 MAINTENANCE ERROR RATE-By Quarter
....TREND IS = 2.44
RATE / 1000 HOURS
0
14
28
42
56
70
84
98
112
126
49.1
101.2
1 2 3 4
CY 74
1 2 3 4
CY 75
1 2 3 4
CY 76
1 2 3 4
CY 77
1 2 3 4
CY 78
1
CY 79

US ARMY SAFETY CENTER
FORT RUCKER, AL 36362

MAJ Geoge G. Reese, Jr.
196-34-6472

SFC Glenn A. Suttles
410-58-7752

SFC Russell C. Fischer
265-66-5425

SFC Kenneth S. Thornton
262-66-5078

SFC Alvin J. Ford
216-40-6419

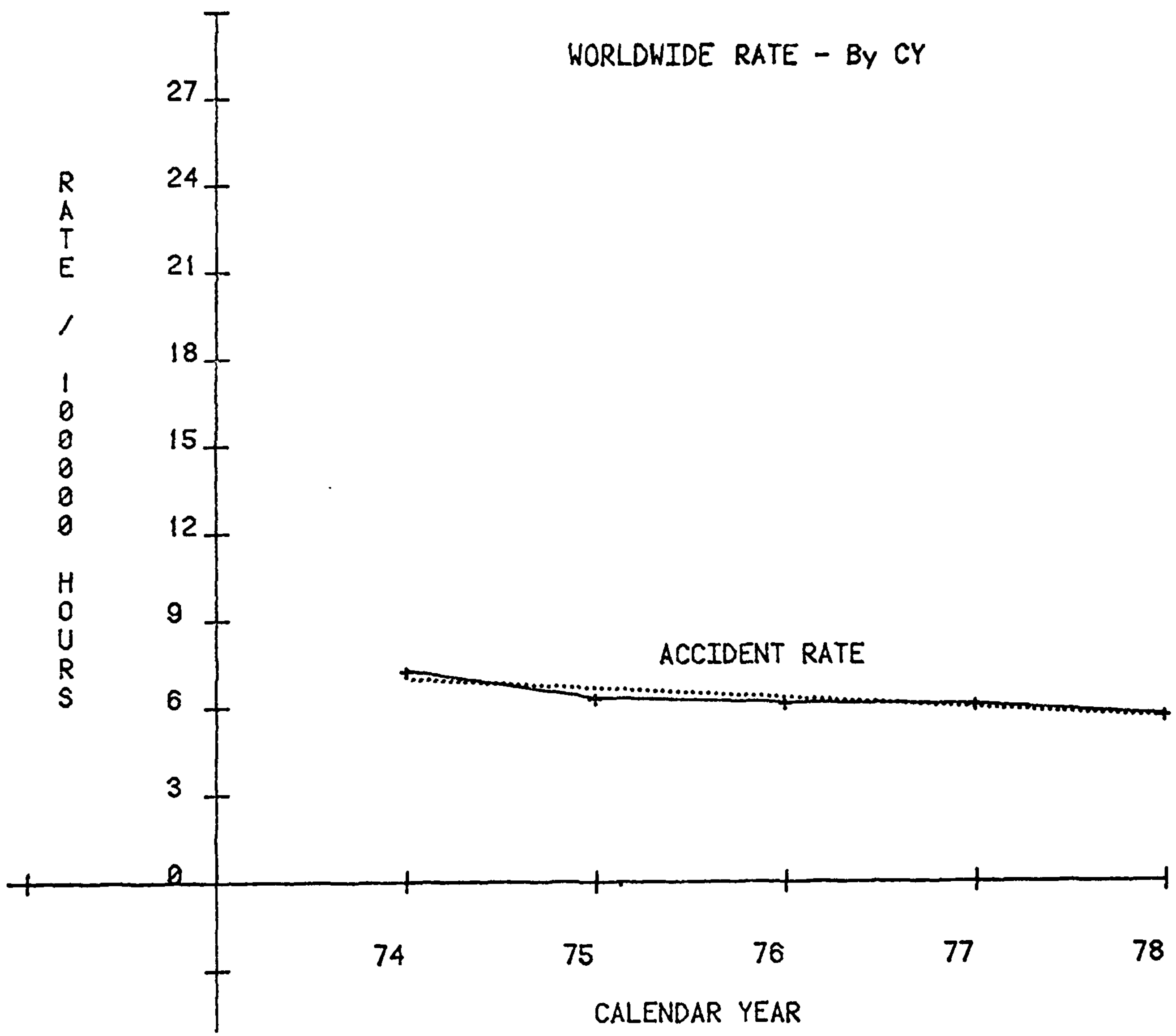
SFC James J. Wheeler
375-54-0762

Mr. Thomas A. Neese (GS-12)
184-26-4851

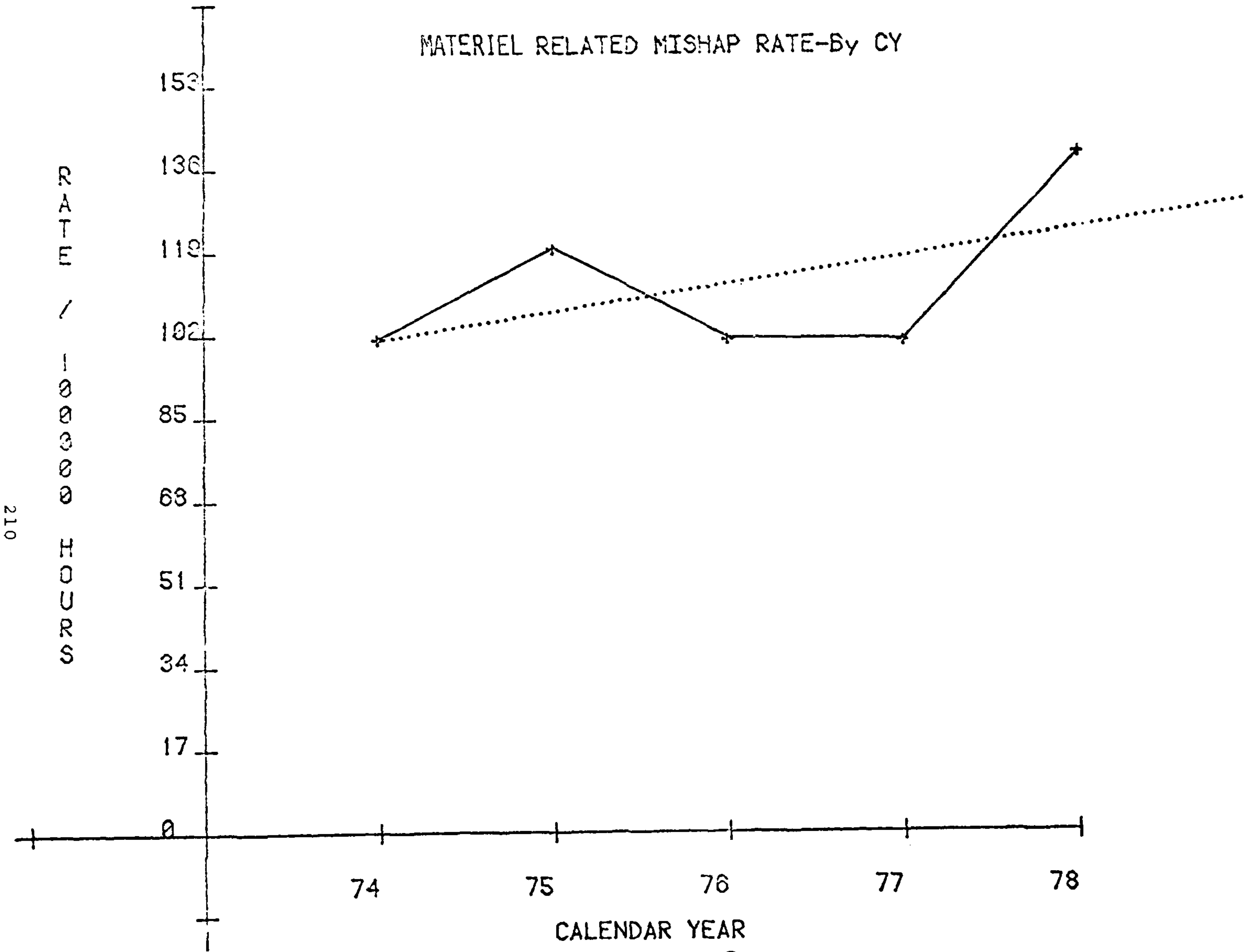
SFC Harold W. Propsma
452-48-3079

US ARMY AVIATION CENTER
and SCHOOL, FT Rucker, AL 36362

SFC Henry C. Crump
455-44-8607
ATZQ-ES-E
Ft Rucker, Al


WORLDWIDE RATE - By CY
RATE / 100000 HOURS
27
24
21
18
15
12
9
6
3
0
ACCIDENT RATE
74
75
76
77
78
CALENDAR YEAR

ANNEX B


MATERIEL RELATED MISHAP RATE-By CY
RATE / 100000 HOURS
153
136
119
102
85
68
51
34
17
0
74
75
76
77
78
CALENDAR YEAR

ANNEX C

ANNEX D

AVIATION LIFE SUPPORT EQUIPMENT (ALSE) MOS

The following areas of the ALSE MOS proposal require further amplification or reconsideration:

a. Personnel space requirements: The proposal reflects a requirement for 597 ALSE personnel in Active Army TOE organizations. Although not included in the proposal, it is estimated that TDA requirements would total 75 to 100 additional personnel. This includes instructors for the proposed ALSE School and generates total Active Army space requirement of 654-679 personnel. This increase is significant, especially in view of the increased manpower demands of new equipment introduction and existing deviations between authorizations and requirements. In that an increase in end strength is unlikely, it is necessary that a trade-off analysis be conducted both within CMF 67 and elsewhere in the Army structure to determine possible sources of ALSE positions.

b. Proposed ALSE Duties: An analysis of the proposal reveals that the duties are primarily supply in nature rather than maintenance. The proposal notes: "The proposed specialty includes supply and limited maintenance functions related to helmets, oxygen systems, survival vests and kits, and flotation equipment, to name a few." Included under proposed duties are: "REPAIRS, CLEANS, AND/OR REPLACES: Aircraft helmets (less avionics items) and sound attenuating devices; torso harnesses; survival radios (operational checks only); search and rescue beacons and emergency rescue devices; survival vests and kits; life rafts and life preservers; body armor; installed and noninstalled oxygen systems/components; and batteries. Repair is nontechnical in nature and if technical repair is required, ALSE items are evacuated to the appropriate higher maintenance category, and replacement items are substituted." The preponderance of the duties involved inspecting, testing, adjusting, obtaining, and maintaining appropriate stockage levels. Duties would become even more supply oriented if responsibilities associated with oxygen systems, ejection seats, and aircraft restraint devices were removed from ALSE.

c. Proposed ALSE Training: Total training time is estimated to be 13 weeks which includes ALSE peculiar subjects as well as general subjects and supply courses. ALSE peculiar training is estimated to require 226 hours (6.5 weeks) which are distributed as follows:

AREA	HOURS
Helmet - fitting and maintenance	25
Flight Clothing - care and maintenance	20
Restraint Devices - inspection and maintenance	*15
Survival Equipment/Kits/Vest - use and inspection	20
Ejection Seat - use and inspection	*22
Survival Avonics - use, care, and inspection	24

AREA	HOURS
Flotation Equipment - use and repair	20
Body Armor - fitting and inspection	12
Oxygen Systems/Components - service and operation	*20
Protective Masks - fitting and maintenance	24
Pilot Aids - use flashlight and penlight	5
Aircraft Learning Production Devices - use and fit	12
Flight Goggles/Sunglasses	7
	226

*In that only 4% of the ALSE positions would be in units having ejection seats and an additional 4% in other units having oxygen equipment, it appears very inappropriate and inefficient in terms of learning decay, to train all ALSE personnel on skills which only 8% will apply. If these duties were removed from the proposal, the only aircraft peculiar duties remaining would be those related to aircraft restraint devices which appears more appropriate as duties for the MOS 67 series repairer. It also would appear to be more effective to place responsibility for oxygen systems and ejection sets under the 67G/H repairer.

d. Grade Distribution: The proposed SGA and resultant grade distribution is inadequate and would produce an ALSE force totally lacking the experience and skills reflected as essential. Specifically, the proposed SGA produces a force which has insufficient E3's (26% too few) and E4's (25% too few) to sustain proposed E5 requirements (42% too many). Insufficient E6's are generated by the SGA (29% too few) to provide reasonable promotion opportunity. The ALSE force as designed would cause extremely rapid promotions to E5 in a futile attempt to match inventory with authorizations resulting in personnel having insufficient time in service to acquire the skill and experience considered essential in the proposal. With promotions to E5 occurring prior to termination of the first enlistment, the ALSE MOS would experience an extremely high migration of personnel from the MOS at reenlistment due to a lack of promotion opportunity to E6. Conversely, because of ease in making E5 in ALSE, the MOS would experience a high migration of E4's from other CMF's upon their reenlistment which would further reduce the technical skill level within the MOS. An MOS authorizing 679 personnel (TO&E and TDA) would, to sustain itself at each level, require an approximate distribution of:

E3	E4	E5	E6	TOTAL
219	219	151	91	680

e. Appropriateness of Proposed MOS/CMF: There are two major areas of concern regarding designation of the proposed ALSE MOS (68()XX) in CMF 67. First, contrary to the proposal, duties do not closely parallel aircraft maintenance functions as do other MOS in CMF 67. Although aviation peculiar, they more closely parallel the functions of CMF 76. Secondly, and of greater significance, is that a logical pattern does not exist to

successively higher level jobs (E7 and above) because ALSE duties will not adequately prepare the individual for supervisory duties (68K40 as an E7 and 67Z50 as an E8) in CMF 67. As a 68K40 under the current MOS structure, an E7 is responsible for supervising armament personnel (68J and 68M), pneudraulics (68H), electrical (68F), structural repair (68G), engine (68B) and powertrain (68D). MOS 68K40 is being revised by this study to reduce the magnitude of supervisory responsibilities; however, addition of ALSE to 68K40 can only further complicate the supervision problems in the aircraft component repair area. It is also doubtful that ALSE personnel would be able to compete favorably, for promotion to E7, with other personnel in CMF 67 based upon promotion by CMF rather than MOS.

e. Flight Status/Flight Physical Requirement: The proposal indicates that personnel must successfully complete a class III flight physical annually. Duties indicate that personnel are required to accompany test pilots on flight inspections of ALSE equipment. Both requirements appear inappropriate. The only ALSE equipment requiring flight test would be oxygen systems. If these duties remain under ALSE, then appropriate positions (8%) could be coded with SQI F.

f. General: It appears that prior to establishment of an ALSE MOS, there is a more urgent need for a comprehensive ALSE program which reflects unit requirements and Army policy. This could serve as a basis of determining capability of meeting requirements within the current MOS and organizational structure and identify new requirements. Properly managed, a significant ALSE capability exists within current capabilities. Establishment of an ALSE MOS will not compensate for many deficiencies in the current system which result from abdication of responsibility. An ALSE MOS is not required for a unit to possess survival radios, ensure that they operate properly, and that they are utilized. Command emphasis and supervision can effectively accomplish all of these without a special MOS.

ANNEX E

CMF 67 MACRIT

Total AVUM Positions Per Acft

	ACFT	67 MOS	TI	68 MOS	AGGREGATE
Cat I	AH-1G/S	1.54	.20	.23	1.97
Cat II	AH-1G/S	1.42	.19	.22	1.83
Cat I	OH-58A	1.05	.16	.25	1.46
Cat II	OH-58A	1.00	.15	.23	1.38
Cat I	UH-1D/H	2.06	.27	.23	2.56
Cat II	UH-1D/H	1.95	.25	.21	2.41
Cat I	CH-47C	4.96	.79	.80	6.55
Cat II	CH-47C	4.63	.73	.73	6.09

Total AVIM Positions Per Acft

	ACFT	67 MOS	TI	68 MOS	AGGREGATE
Cat II	AH-1G/S	.27	.05	.29	.61
Cat II	OH-58A	.24	.03	.34	.61
Cat II	UH-1D/H	.32	.07	.31	.70
Cat II	CH-47C	1.14	.16	1.06	2.36

Total Personnel Per Acft

ACFT	AVUM	AVIM	AGGREGATE
*AH-1G/S	1.97	.61	2.58
OH-58A	1.46	.61	2.07
UH-1D/H	2.56	.70	3.26
CH-47C	6.09	2.36	8.45

*Does not include 68J/68M Authorizations

CHAPTER 7

NONAVIATOR FLYING STATUS FOR ENLISTED PERSONNEL

CONTENTS

CHAPTER 7

NONAVIATOR FLYING STATUS FOR ENLISTED PERSONNEL

1. INTRODUCTION. Nonaviator flying status for enlisted personnel is a many faceted program that is under an umbrella of Public Law, Executive Order, DOD Directives, and Army Regulations to provide necessary monetary incentives to attract and retain the required personnel to meet manpower requirements in Army Aviation Programs and to provide regulatory guidance for implementation, managing, and budgeting the Flight Status Program.

Historically, the Army has been able to obtain sufficient volunteers from the enlisted force to meet enlisted flight duty requirements. However, in an era of decreasing manpower availability, increasing costs, changing military doctrine, and increased training requirements, a reassessment of the program is warranted to ensure the Army's continued ability to meet manpower requirements while at the same time reducing personnel turbulence and keeping the programs costs to the minimum level that is necessary to attract and retain the required manpower.

Though the flight status program is still producing the required number of enlisted volunteers, there's no guarantee that it will continue to do so. This is in part due to the changing attitudes of enlisted personnel, perceptional differences as to why flight duty entitlements are authorized, inequity of authorizations for flight status and training programs when compared to programs for rated aviators, and the inability of enlisted personnel to plan ahead when considering flight duty entitlements.

The changing attitude of the enlisted force is attributable to the many changes that have been made in the military and social structure of the country. The two areas that have affected the enlisted force the most are their changing sense of values and the factors that are considered essential in providing job satisfaction and motivation.

The perceptional differences center on the reason flight duty entitlements are paid. The majority of enlisted personnel consider flight status as a positional pay that is keyed to specific duty position titles, as recognition for being capable of doing the job required, and as a hazardous duty pay; while public law and Congressional edict defines flight pay as a dual function entitlement that is made up of Incentive and Hazardous Duty Pay Elements. The incentive pay element is that percentage (60-65%) that is to attract and retain personnel in flight duty positions and the hazardous duty element (35-40%) that is to compensate for the added risks incurred while participating in aerial flight.

To an increasing segment of the enlisted force, many factors are viewed as being inequitable and impact on the individuals morale and willingness to participate in the Nonaviator Flight Status Program. Crew chiefs for the

AH-1G/S attack helicopter view their not being authorized flight status as being inequitable. It makes no difference to position incumbents whether they are required to fly or not. This is because of the incumbents understanding that flight status authorizations are keyed to duty position titles and as recognition for their ability to perform the requisite duties. A contributing factor is award of flight status to supervisors, technical inspectors, and maintenance personnel of these units on the basis of number of aircraft assigned without regard to inflight duties, when the specific duty position of crew chief is not authorized flight status.

Another inequity is the authorizations contained in Section IV, AR 600-106, Aeronautical Designations and Flying Status for Army Personnel, that permits award of either nonaviator crewmember or noncrewmember flight status to certain supervisors and air observers depending on unit of assignment or duty position title held by the enlisted member concerned.

Two other factors have been identified that are not directly related to flight status but are considered inequitable. These are the development and allocation of resources to perform the training identified in the Aircrew Training Manuals (ATM) for Army aviators and the lack of comparable actions for enlisted members of the aircrew complement and the non-applicability of crew rest policies for enlisted personnel when compared to crew rest policies for the rated Army aviator or with those for other Services.

The last major area identified concerns the enlisted members inability to plan ahead when considering the monetary aspects of the flight status program. Under the current program, authorizations for enlisted flight status are valid only while the individual is assigned to a specific duty position within a specific unit. Any change of duty position or unit requires revalidation of the individuals flight status authorization regardless of the reason for the change. In many cases, the acceptance of promotion from E5 to E6 will necessitate termination from flight status, due to duty position change, and would result in a reduction of total entitlements. These factors when compared to the policy of continued flight pay for rated aviators, regardless of unit of assignment or duty position held, is a source of irritation to most enlisted personnel.

In addition to the factors stated above, numerous problems are attributable to the often outdated, vague, fragmented, and contradictory guidance contained in AR 600-106. This, when coupled to the absence of documentation in The Army Manpower Authorization Documents (TAADS) has led to diverse interpretation of nonaviator flying position authorizations and a total lack of aggregate audit capability.

Under the current program, all personnel and budgetary actions are based on the number of personnel paid nonaviator flight status by category (crewmember/noncrewmember) rather than on total authorizations. Only 67% of

the total nonaviator flying positions were documented in TAADS as of 31 Mar 79. An attempt was made to determine total nonaviator flying position authorizations, howev^r, this proved futile due to the contradictions and vagueness of AR 600-106 (See Annex A).

. The lack of documentation of nonaviator flying positions stems basically from the authority granted unit commanders by AR 600-106 to designate which positions may be authorized flight status. In addition, a review of authorization documents indicates the document developers are not coding all identifiable flying positions with the special skill identifier (SQI) "F." SQI "F" when used as the fifth character of MOS, denotes flight status is authorized. If all nonaviator flying positions were identifiable in TAADS, the diverse interpretation of authorizations now possible would be greatly reduced and would provide program managers the required audit capability. An additional action, that would enhance the program would be to develop a method of identifying in the TAADS not only the flying position but also category of flight status (crewmember/noncrewmember) authorized in TAADS.

Though many problems were identified that affect the overall Enlisted Non-aviator Flight Status Program, a complete assessment could not be completed due to the limited resources available to the Study Group. It is felt that a complete assessment of the program is required in order to identify true requirements and to define the regulatory guidance contained in AR 600-106. See Annex B for specific items and general areas that were identified as requiring action or assessment.

2. NONAVIATOR CREWMEMBER FLYING STATUS.

A. BACKGROUND. UP Para 10, AR 600-106 (Aeronautical Designations and Flight Status for Army Personnel) Nonaviator Crewmember flying status is authorized to be awarded to those personnel (members of the Aircrew Complement) whose primary duties are essential to the operation of the aircraft, operation of an airborne system, aeromedical evacuation, or for completing a specific mission that can only be accomplished during aerial flight.

B. DISCUSSION. Under the current criteria established by AR 600-106, nonaviator crewmembers are authorized on the basis of MOS qualification in a specific category of aircraft, and by duty position title for CMF 67 personnel. For other personnel; crewmember flight status is primarily based on performing specific duties, i.e.. gunners of primary aerial weapons systems, students undergoing aircrew training, medical aidmen for AIREVAC missions, students, operators, and supervisors on airborne electronic sensory systems and door gunners.

The use of this general criterion, without guidance being provided to identify the specific duties, training, and type of mission that qualify for award of crewmember flight status, has led to diverse interpretation and

application of the regulation. Additional factors, that allow for diverse interpretation of authorizations, are attributable to the use of duty position titles in AR 600-106 that are not aligned with those used in AR 611-201 (MOS Classifications) and/or those used in the Army Manpower Authorization Documents (TAADS); and the use of categories of aircraft, that do not correspond to the aircraft in the inventory, to identify the number of enlisted air crewmembers authorized per aircraft.

The greatest problem in determining authorizations is the lack of documentation in TAADS to identify those positions that are authorized to be awarded nonaviator crewmember flight status. This is a result of document developers not being able to determine who is authorized and a lack of discipline being imposed to ensure those positions that can be identified are coded with the Special Skill Identifier (SQI) F. The lack of flight status position documentation also denies program administrators and managers an aggregate audit capability. Another factor that adds confusion in determining authorizations is the conflicting authority to award either nonaviator cremember or noncrewmember flight status to supervisors and air observers depending on unit of assignment or duty position held by the enlisted member concerned. Though not directly related to the authority to award flight status, the conflict of data contained in AR 570-2 (MACRIT) and that of AR 600-106 could effect morale and the units ability to meet mission requirements. The conflict concerns AR 570-2 which indicates that U-21A and OH58A aircraft are not authorized flying crew chief and AR 600-106 authorizes these positions flight status under certain conditions.

Due to the uncoordinated and fragmented regulatory guidance that pertain to the enlisted nonaviator program, commanders and managers are unable to establish procedures that adequately identify manpower or budgetary requirements. This could ultimately result in the programs inability to attract and retain the required manpower to support the Army's needs.

C. FINDINGS. Consolidated with Findings of Section 3 at end of Chapter.

D. RECOMMENDATIONS. Consolidated with Recommendation of Section 3 at end of Chapter.

3. NONAVIATOR NONCREWMEMBER FLYING STATUS.

A. BACKGROUND. Para 11, AR 600-106, provides for the award of Nonaviator Noncrewmember flight status to those personnel (other than the Aircrew Complement) performing military duties in flight which are directly related to the inflight mission of the aircraft. This authority also provides for award of noncrewmember flight status to enlisted aircraft maintenance personnel occupying specifically identified TOE/MTOE/TDA duty positions and for other aircraft maintenance personnel depending on the number of aircraft assigned to the organization concerned. All other personnel authorized UP Para 11, AR 600-106, are identified by receiving specified training or performing specific duties.

B. DISCUSSION. The majority of personnel authorized Nonaviator Noncrewmember flight status by Para 11, AR 600-106, Aeronautical Designations and Flying Status for Army Personnel hold MOS in CMF 67. Unlike Crewmember Flight Status where all authorizations are based on the same criteria, noncrewmembers are identified in four ways; duty position titles only, duty position and aggregate number of aircraft assigned to unit concerned, on only the aggregate number of aircraft assigned, and by the specific duties to be performed.

As with crewmember authorizations, the use in AR 600-106 of duty position titles that are not aligned with those of AR 611-201 (MOS Classification) and the manpower authorization documents (TOE/MTOE/TDA) and the lack of definitive guidance for determining duties that qualify for award of flight status allows for diverse interpretation and application of the regulatory guidance in determining authorizations. Problems are further compounded by the lack of documentation in TOE, MTOE, and TDA to positively identify authorized flight status positions and the contradictory authority to award either crewmember or noncrewmember status to certain supervisors or air observes dependent on unit of assingnment, duty position, and/or MOS.

Contributing to the overall problem is the authority for commanders to award noncrewmember flight status to CMF 67 personnel based on the number of assigned aircraft or major fraction thereof without regard to inflight duty requirements, duty position, or units mission. Also it appears that the authority to award flight status in certain cases may be outdated and no longer serving a purpose due to changes in doctrine, aircraft, aircraft weapon systems, or organizational structures. For example, in attack helicopter units equipped with the AH-1G/S attack helicopter the authority to place supervisory personnel, technical inspectors and armorers is the same as it was when like units were equipped with the UH-1B/C gun ships even though the AH-1G/S is only a two place helicopter with a crew complement of two rated aviators and the requirements for supervisors or armorers to fly on the aircraft has been greatly reduced.

The net results of these factors plus the lack of centralized management, aggregate audit capability, and discipline being exercised to ensure that only those personnel required to accomplish the assigned mission are placed on flight status can lead to the loss of productive manhours, (each individual on nonaviator flight status must fly a minimum of 4 hours per month to qualify for pay), and degraded mission capability, (availability of aircraft and aircraft seats being occupied by personnel qualifying for flight pay). The lack of audit capability and discipline on authorizations makes it impossible for program administrators and managers to determine the total number of personnel authorized flight status except at the organizational level. This in turn creates severe problems in determining manpower requirements and in budgeting to meet the needs of the overall program. Under the present program, these actions are based on the number of personnel being paid flight status by category rather than on

authorizations (see Annex A). The accumulative effect of these problems could ultimately lead to the collapse of the enlisted flight status program due to its inability to attract and retain the manpower required to support operational requirements.

C. FINDINGS.

(1) The nonaviator flight status program is uncoordinated, fragmented and lacks centralized management.

(2) Regulatory guidance is outdated, confusing, contradictory, and inequitable.

(3) Requirements and authorizations are not properly documented.

(4) Lack of an aggregate audit capability precludes effective management in terms of programming for personnel and budgetary requirements.

(5) Noncrewmember flight status is used to a significant degree as an incentive without regard for the necessity to perform essential duties inflight. This results in a significant loss of potential maintenance manhours.

(6) Personnel authorizations of AR 570-2 are not in concert with flight status authorizations of AR 600-106.

D. RECOMMENDATIONS.

(1) Conduct a thorough assessment of all nonaviator positions whose incumbents are required to participate in frequent and regular aerial flight in the performance of their duties.

(2) Authorize flight duty entitlement for qualified personnel filling documented flight status positions.

(3) Align authorizations of AR 600-106 with MACRIT data of AR 570-2.

(4) Document requirements and authorizations in the manpower authorization documents (TOE/MTOE/TDA).

(5) Develop an audit capability to ensure compliance with manpower and budgetary limitations.

(6) Revise AR 600-106 (Aeronautical Designations and Flying Status for Army Personnel).

Annex A

Analysis of Flight Status Position Requirements and Authorizations

The lack of an aggregate audit capability to determine the total number of enlisted nonaviator flight status positions required or authorized negates the efforts of program managers to accurately predict the budgetary or manpower requirements needed to support the nonaviator flight status program.

Analysis of the current program by the study group disclosed the only data currently available to program managers in assessing requirements is the number of personnel being paid flight duty entitlements and the monthly rate of entitlements by grade. No data was available on the number of officers and/or warrant officers that were entitled to nonaviator flight status entitlements.

FLIGHT DUTY ENTITLEMENTS PAID ENLISTED MEMBERS AS OF 31 MAR 79.

Crewmembers Grade	NO Paid	*Rate of Entitlements	Noncrewmembers	
E9	0	$105.00	No breakout by grade was available.	
E8	10	$105.00	All noncrewmembers are authorized	
E7	76	$80.00-105.00	on the flat rate of $55.00 per month.	
E6	596	$70.00-100.00		
E5	1888	$60.00-95.00		
E4	932	(E3&E4)$55.00-80.00		
E1-E3	282	E2 $50.00-60.00	Total Paid Noncrewmember	
		E1 $50.00-55.00	entitlements	2,768
Total	3783			
		Total Personnel Paid Flight Duty Entitlements		6,551

*Rate of entitlements are based on grade and length of service of service member concerned.

Comparing the number of personnel paid flight status with the positions identified as being authorized crewmember flight status and with the standards of grade (SGA) authorized for duty positions disclosed disparities between authorizations and the number of personnel being paid in the grades of E6, E7, and E8.

Based on the guidance of AR 600-106, SGAs, and analysis of TAADS, approximately 221 (37%) of E6, 41 (54%) of E7, and 10 (100%) of E8 personnel being paid crewmember flight status are either not authorized flight duty entitlements or are being paid the crewmember rate rather than at the noncrewmember rate.

All attempts by the study group to identify the total nonaviator flight status position requirements and authorizations by counting the number of positions documented in TAADS or by applying the criteria established by Section IV, AR 600-106, to position titles listed in TAADS proved inconclusive.

ANALYSIS OF NONAVIATOR FLIGHT STATUS POSITIONS

Methodology	Crewmember	Noncrewmember	Total
Flight Positions identified in TAADS:	3098	1322	4420
*Restricted Application of Criteria of AR 600-106	2925	2818	5743
**Open Application of Criteria of AR 600-106	3974	3360	7334
Number of Personnel Paid	3783	2768	6551

*Application of Criteria to TAADS made in the narrowest scope possible.

**Criteria applied in a manner consistent with current application of guidance made at the organizational level.

No attempt was made by the study group to determine total program costs due to the variable rate of entitlements for the crewmember positions and the inability to determine the number of positions required or authorized.

ANNEX B

UNRESOLVED PROBLEMS AFFECTING THE NONAVIATOR ENLISTED FLIGHT STATUS PROGRAM

During the study group's analysis of the enlisted Nonaviator Flight Status Program, many problem areas were identified. The majority of these problems stem from lack of definitive regulatory guidance. In addition, many of the administrative problems affecting the program have resulted in uncoordinated and fragmented actions due to lack of centralized management.

Any attempt to alleviate these problems and provide the necessary regulatory guidance and managerial controls, needs to address the following items:

(1) Define the categories of nonaviator flight status, (crewmember-noncrewmember). Definition should include, by category, a listing of the inflight duties, training, and/or operational missions that qualify an individual for award of flight status (Paras 10 and 11, AR 600-106).

(2) Evaluate the manhours saving that would be realized by reducing or eliminating the requirement to fly a minimum of four hours per month to qualify for flight duty entitlements (DOD Military Pay and Allowances Entitlements Manual).

(3) Standardize duty position titles used in AR 600-106, AR 611-201 and TAADS (Sec IV, AR 600-106; AR 611-201; Sec II TAADS).

(4) Require all flight status positions authorized UP Paras 10 and 11, AR 600-106 be documented in TAADS. Code all flight status positions with special skill identifier (SQI) F (Sec II, TAADS).

(5) Develop a method of coding the TAADS documented flight status positions to identify the category (crewmember/noncrewmember) authorized.

(6) Develop an aggregate audit capability that will provide program administrators and managers a method of determining total nonaviator flight status authorizations.

(7) Assess enlisted air crewmember (crew chief, flight engineer, sensor operator, gunner, etc.) requirements for each type aircraft in the Army inventory (Para 106, AR 600-106).

(8) Assess operational requirements and align personnel authorized by AR 570-2, MACRIT with authorizations for flight status in AR 600-106.

(9) Revise AR 600-106 to list enlisted air crewmember requirements by aircraft designation (CH-47, U-21, OH-58, EH-60, etc.) rather than by category of aircraft (Para 10b(1)(8), AR 600-106).

(10) Assess requirements for aero scout observers; if valid requirement exists, make position authorization determination for MOS required (19D or 67V), and align MACRIT accordingly (Para 10b(7) and h, AR 600-106 and Sec XI, AR 570-2).

(11) Identify specific training requirements and resources necessary to fully qualify personnel for aero scout and air observer duties (Para 10 and 11, AR 600-106).

(12) Determine which category of flight status (crewmember/noncrewmember) is authorized for aero scout observers and air observers and align authority in AR 600-106 (Para 10b(7) and 10h and Para C, AR 600-106).

(13) Assess requirements and define aircraft and/or weapon systems that meet the criteria for authorizing aerial weapons system gunners and door gunner flight status (Para 10c and 9, AR 600-106).

(14) Assess requirements and define inflight duties for supervisors of airborne electronic sensory system operators being placed on crewmember flight status. Align category of flight status authorized to meet the duty requirements. Consideration should include evaluation of supervisors identified in Para 11a(1)(4) who are currently authorized noncrewmember flight status (Para 10f and para 11a(1)(4), AR 600-106).

(15) Define inflight duties and assess requirements for all supervisory personnel identified in para 11, AR 600-106 to be placed on noncrewmember flight status (Para 11a(1)(4), AR 600-106).

(16) Evaluate operational requirements and validate authority to place aircraft maintenance and component repair personnel on noncrewmember flight status only on the basis of aggregate number of assigned aircraft. Current authority does not identify duty positions or consider inflight duties. (Para 11a(1) and (2), AR 600-106).

(17) Evaluate possible benefits to all units if aircraft technical inspectors were authorized flight status without regard to total number of aircraft assigned to the unit. Principle benefit would be to units authorized six or less aircraft (Para 10b(1)(2), AR 600-106).

(18) Assess requirements and define personnel (MOS) and frequency of photographic missions required to qualify photographers for flight status (Para 11d, AR 600-106).

(19) Assess requirements for armorers and identify inflight duties required to be performed to qualify for award of flight status (Para 11e, AR 600-106).

(20) Define which weapon systems are "primary aerial weapon systems" which require armorers to be on flight status in order to maintain the system (Para 11e, AR 600-106).

(21) Evaluate requirements, define qualifying inflight duties, and identify positions that are authorized flight status for advisory duty with ARNG, USAR, MAAG, and military missions (Paras 11g and h, AR 600-106).

(22) Evaluate current procedures used to identify and define flight status authorizations in Section IV, AR 600-106. Assess impact of changing procedures of authorizing flight status for low density requirements from paras 10 and 11 to a modified procedure under para 12, AR 600-106. Identifying specific areas to be authorized under para 12 would require major changes to format and would need provisions to provide orders being cut with an effective date other than the date of the order as is now the case.

(23) Evaluate changing current delegated approving authority for requests UP para 12, AR 600-106 to a central approving authority.

(24) Establish procedures that would require revalidation of all flight status authorizations UP para 12, AR 600-106 on a scheduled basis.

(25) Develop procedures that would provide for permanent award and position identification in TAADS for unanticipated position requirements that were originally authorized UP para 12, AR 600-106.

(26) Establish and implement procedures to review requirements and audit current authorizations at all levels of command on a scheduled basis.

(27) Assess impact of bringing all enlisted personnel authorized noncrewmember flight status under the same protection of 120 days advance notice of removal from flight status afforded crewmembers (Interim Change 101 to AR 600-106).

(28) Define circumstances that would warrant removal from flying status without providing the 120-day advance notice and establish procedures to be followed in these cases.

(29) Evaluate feasibility of publishing separate regulatory guidance for authorizing flight status for enlisted personnel and include criteria and procedural guidance for awarding the aircrewman badge.

(30) Evaluate any recommendations for reduction of flight status authorizations for their impact on unit readiness and the retention of personnel.

(31) Develop administrative procedures that may be used to replace (reassign to New Flight Status Position) personnel who are assigned to authorized flight status positions and are medically unqualified for flying duty.

CHAPTER 8

RESERVE COMPONENTS

CONTENTS

CHAPTER 8

RESERVE COMPONENTS

1. INTRODUCTION. The purpose of the Reserve Components of the Army (RC), as stated in section 262, Title 10, United States Code, is to provide the Active Army (AA) with the trained units and individuals needed in time of war, national emergency, or such other times as the national security requires. The Deputy Assistant Secretary of Defense (Reserve Affairs) stated in April 1974 that "National policy decrees that they (Reserve Components), rather than draftees, will provide initial and primary augmentation for the active armed forces in any future emergency. Under the Total Force Policy, which now guides military planning, the role of the ARNG and the USAR will become more important in the future." The discontinuation of the Selective Service program and the advent of the "All Volunteer" force have resulted in significant RC recruiting and retention problems.

2. RESERVE COMPONENTS DOCUMENTATION.

A. BACKGROUND. Reserve units use the same authorization documents as the Active Army. This study recommends adjustments to CMF 67, SGA, and authorization documents which results in significant increases in E3 and E4 authorizations and similar reductions in E5, E6, and E7 authorizations. Such action will further exacerbate existing RC recruiting and retention problems.

B. DISCUSSION. It appears appropriate to continue using the same unit organizational structures for both AA and RC organizations. The same cannot be said for grade authorizations contained therein, if it is desired that skilled AA ETS losses serve as a potential source of accessions to RC organizations. This is because the AA personnel authorization structure and associated TOE/TDA represents requirements based upon a sustainable MOS grade structure which is capable of meeting these requirements. This concept is predicated on the preponderance of new enlisted requirements being obtained in the form of E1 accessions, with accession of new personnel in grades E4, E5, and E6 having negligible impact. This is essentially a self-renewing system which recognizes losses in the inventory through attrition and which "grows its own" requirements at each level, from lower grade resources.

Conversely, RC accessions are not predominately E1's. Experienced AA personnel in grades E4, E5, and E6 constitute a significant portion of potential accessions. Consequently, if a TOE was being developed for only RC usage, it would reflect a significantly higher average grade structure because of the RC capability of immediate accession of Skill Level 2 and 3 personnel. Therefore, use of AA authorization documents act as a significant deterent to RC recruitment of recent AA losses. An E5 is not interested in filling an E3 or E4 position and recognizes the poor promotion potential which this represents.

Approval of the grade adjustments recommended by this study, which as an example reduce authorizations at E5 by 30% and E6 by 13%, will significantly reduce the aviation maintenance organizational grade structure. Higher RC TOE/TDA grade structures appear appropriate in view of peculiar accession and retention problems and as a means of enhancing RC recruitment of skilled prior service personnel. If RC organizations were authorized, under pre-mobilization conditions, overstrengths of up to 40% in grades E4, E5, E6, and E7 while remaining within total strength limitations, many problems would be alleviated. For example, the Combat Support Aviation Company (UH-1) authorizations in CMF 67 under this criteria would be:

CSAC (UH-1) TOE 57-57H320
CMF 67 AUTHORIZATIONS

Grade	Current	Proposed By Study	With 40% Overstrength	Change
E8	1	1	1	0
E7	5	3	4	+1
E6	5	4	6	+2
E5	30	15	21	+6
E4	10	22	31	+9
E3	13	19	1	-18
TOTAL	64	64	64	0

This approach provides RC units adequate flexibility to compensate for their peculiar problems while concurrently providing additional mobilization skills. It should be noted that even with 40% overstrengths, adjusted authorizations remain below current levels in all grades except E4 and E6.

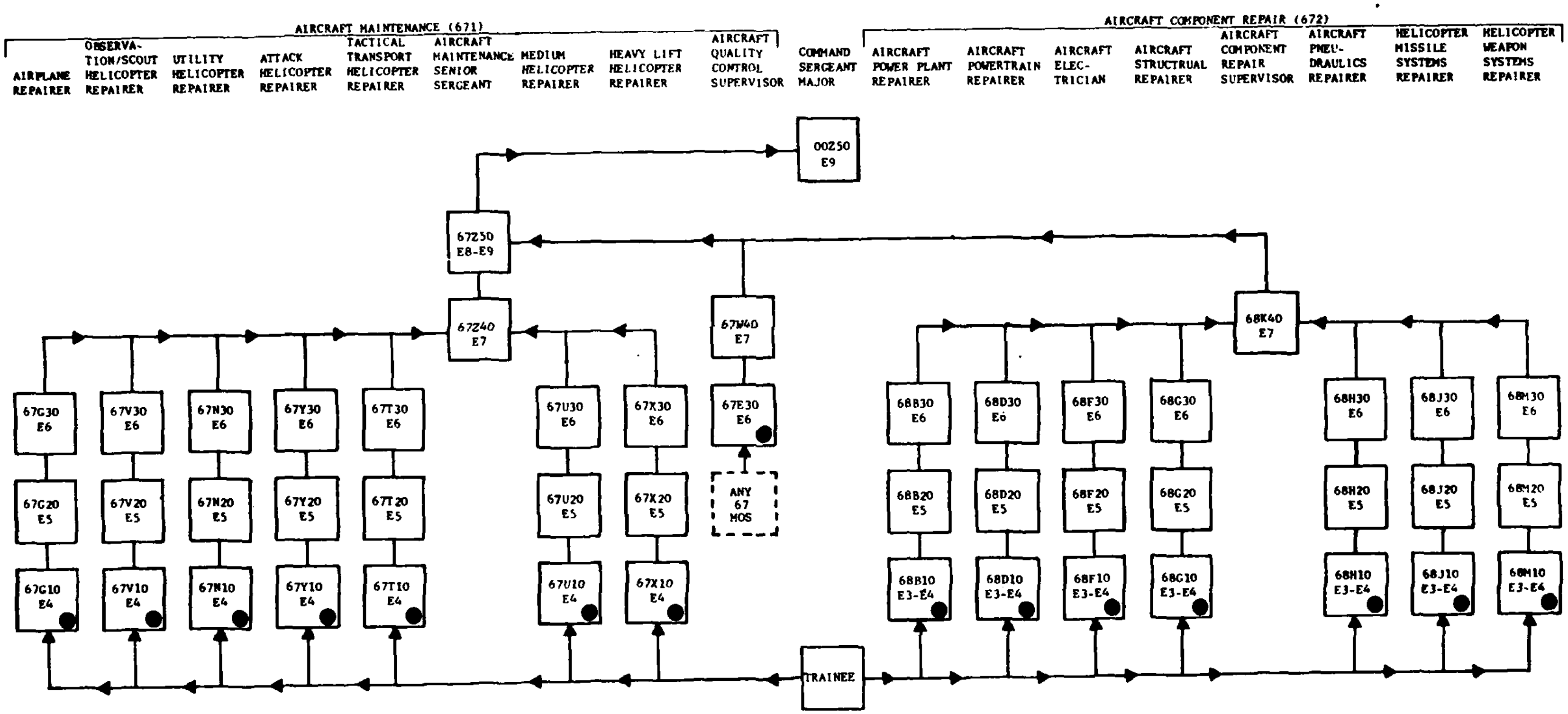
C. FINDINGS. Reserve Components face increased problems in recruiting and retention of aviation maintenance personnel as a result of proposed CMF 67 restructuring.

D. RECOMMENDATION. Approve proposed CMF 67 restructuring; however, provide authority for Reserve Components organizations to maintain 40% overstrengths in CMF 67 in grades E4, E5, E6, and E7. This increased grade distribution will not change total strength authorizations.

APPENDIX A

MOS STRUCTURE AND TITLES

CAREER MANAGEMENT FIELD--AVIATION MAINTENANCE (67)

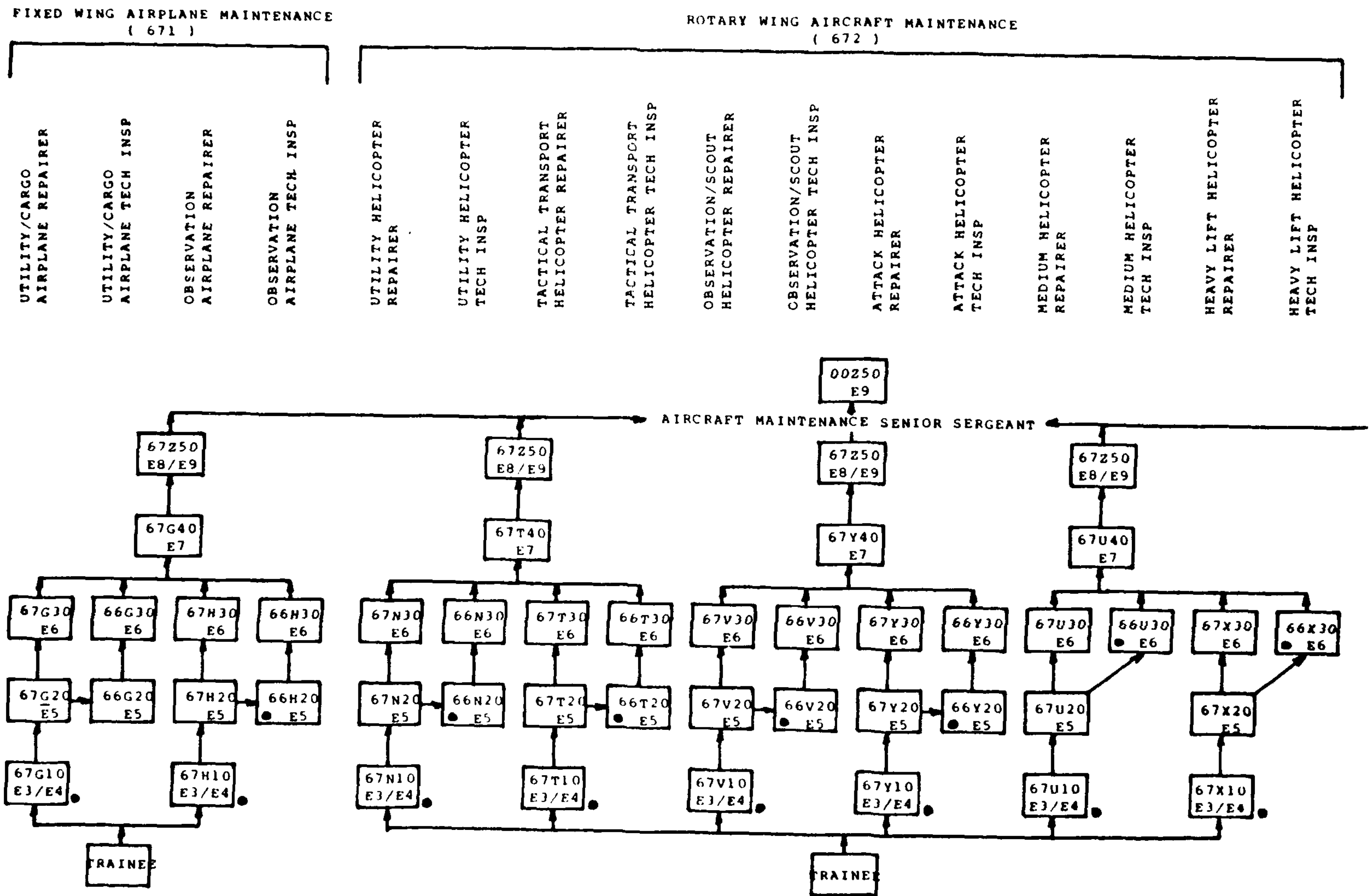


SUBSTITUTABILITY: Between MOS 67N, 67V, and 67Y at comparable level of skill; between MOS 68J and 68M at comparable level of skill.

→ Line of normal progression.

● Approved service school program of instruction. Refer to DA Pam 351-4 for course information and to appropriate class schedule for availability of classes.

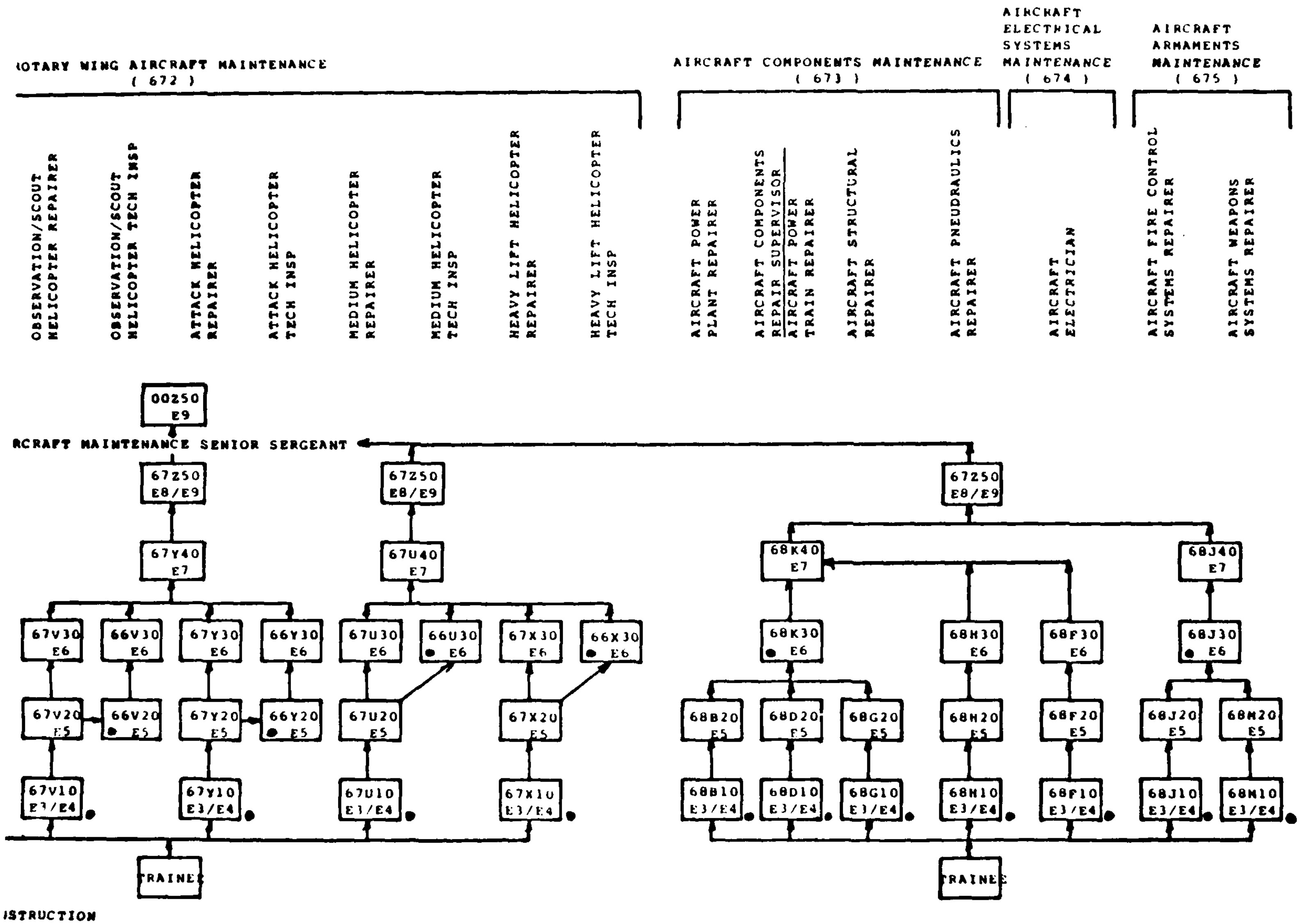
CAREER MANAGEMENT FIELD---AVIATION MAINTENANCE (67)



SUBSTITUTABILITY: NONE

● SERVICE SCHOOL PROGRAM OF INSTRUCTION

ARBER MANAGEMENT FIELD---AVIATION MAINTENANCE (67)



CMF 67

MOS LISTINGS

CURRENT

MOS	TITLE
67G	Airplane Repairer
67N	Utility Helicopter Repairer
67T	Tactical Transport Helicopter Repairer
67U	Medium Helicopter Repairer
67V	Observation/Scout Helicopter Repairer
67W	Aircraft Quality Control Supervisor
67X	Heavy Lift Helicopter Repairer
67Y	Attack Helicopter Repairer
67Z	Aircraft Maintenance Senior Sergeant
68B	Aircraft Powerplant Repairer
68D	Aircraft Powertrain Repairer
68F	Aircraft Electrician
68G	Aircraft Structural Repairer
68H	Aircraft Pneudraulics Repairer
68J	Helicopter Missile Systems Repairer
68K	Aircraft Component Repair Supervisor
68M	Helicopter Weapon Systems Repairer

PROPOSED

66G	Utility/Cargo Airplane Technical Inspector
66H	Observation Airplane Technical Inspector
66N	Utility Helicopter Technical Inspector
66T	Tactical Transport Helicopter Technical Inspector
66U	Medium Helicopter Technical Inspector
66V	Observation/Scout Helicopter Technical Inspector
66X	Heavy Lift Helicopter Technical Inspector
66Y	Attack Helicopter Technical Inspector
67G	Utility/Cargo Airplane Repairer
67H	Observation Airplane Repairer
67N	Utility Helicopter Repairer
67T	Tactical Transport Helicopter Repairer

67U	Medium Helicopter Repairer
67V	Observation/Scout Helicopter Repairer
67X	Heavy Lift Helicopter Repairer
67Y	Attack Helicopter Repairer
67Z	Aircraft Maintenance Senior Sergeant
68B	Aircraft Powerplant Repairer
68D	Aircraft Powertrain Repairer
68F	Aircraft Electrician
68G	Aircraft Structural Repairer
68H	Aircraft Pneudraulics Repairer
68J	Aircraft Fire Control Systems Repairer
68K	Aircraft Components Repair Supervisor
68M	Aircraft Weapon Systems Repairer

APPENDIX B

PERSONNEL AUTHORIZATIONS

CMF 67
SUMMARY

MOS	CURRENT E3	E4	E5	TI* E6	S E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
66G												22	37				59
66H												13	24				37
66N												165	263				428
66T												16	20				36
66D													131				131
66V												86	145				231
66X**																	
66Y												65	110				175
66 Series Total												367	730				1097
67G	59	135	375	90	75				734	145	139	85	21	52			442
67H	Included in 67G									83	82	44	13				222
67N	572	797	2217	430	228				4244	1403	1287	902	313				3905
67T	6	13	72	28	46				165	48	37	30	11				126
67U	541	317	253	85	412				1608	540	523	373	136				1572
67V	294	700	768	227	70				2059	688	646	428	128				1890
67X**					6				6				4				4
67Y	500	477	688	177	57				1899	635	641	389	154				1819
67Z						1245	322	18	1585					801	332	34	1167
67 Series Total	1972	2439	4373	1037	894	1245	322	18	12300	3542	3355	2251	780	853	332	34	11147
68B	277	246	162		61				746	263	246	176					685
68D	214	145	65		21				445	156	159	109					424
68F	150	117	89		18				374	140	130	86	38				394
68G	414	366	322		85				1187	406	396	300					1102
68H	137	65	41		5				248	72	120	51	25				268
68J	274	312	123	1	163				873	264	272	190	176	97			999
68M	207	288	114	1	78				688	219	213	160					592
68K						206			206				297	207			504
68 Series Total	1673	1539	916	2	431	206			4767	1520	1536	1072	536	304			4968
CMF TOTAL	3645	3978	5289	1039	1235	1451	322	18	17067	5062	4891	3690	2046	1157	332	34	17212

*MOS 67W redistributed into other MOS

** MOS proposed for Reserve Force only

AIRPLANE REPARIER DISTRIBUTION

	E3	E4	E5	E6	E7	TOTAL
CURRENT (TAADS) 67G	59	135	375	165	0	734
PROPOSED						
67G	145	139	85	21	52	442
66G	0	0	22	37		59
67H	83	82	44	13		222
66H	0	0	13	24		37
TOTAL	228	221	164	95	52	760
CURRENT OPERATING 67G	122	177	317	93	0	709

UTILITY HELICOPTER REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 67N	572	797	2217	658	4244
PROPOSED					
67N	1403	1287	902	313	3905
66N	0	0	165	263	428
TOTAL	1403	1287	1067	576	4333
CURRENT OPERATING	1288	877	1624	567	4356

TACTICAL TRANSPORT HELICOPTER REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 67T	6	13	72	74	165
PROPOSED					
67T	48	37	30	11	126
66T	0	0	16	20	36
TOTAL	48	37	46	31	162
CURRENT OPERATING 67T	0	1	4	29	34

MEDIUM HELICOPTER REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 67U	541	317	253	497	1608
PROPOSED					
67U	540	523	373	136	1572
66U	0	0	0	131	131
TOTAL	540	523	373	267	1703
CURRENT OPERATING 67U	581	500	347	414	1842

OBSERVATION/SCOUT HELICOPTER REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 67V	294	700	768	297	2059
PROPOSED					
67V	688	646	428	128	1890
66V	0	0	86	145	231
TOTAL	688	646	514	273	2121
CURRENT OPERATING 67V	762	675	629	287	2353

QUALITY CONTROL SUPERVISOR DISTRIBUTION

CURRENT (TAADS) 67W — All authorizations merged with 67 Series MOS

PROPOSED — MOS deleted with duties combined with Technical Inspector duties (66 Series MOS)

	E3	E4	E5	E6	E7	TOTAL
CURRENT OPERATING 67W	0	0	2	468	231	701

HEAVY LIFT HELICOPTER REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 67X	0	0	0	6	6
PROPOSED 67X	0	0	0	4	4
CURRENT OPERATING 67X	34	75	34	33	176

ATTACK HELICOPTER REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 67Y	500	477	688	234	1899
PROPOSED					
67Y	635	641	389	154	1819
66Y	0	0	65	110	175
TOTAL	635	641	454	264	1994
CURRENT OPERATING 67Y	516	650	555	152	1873

AIRCRAFT MAINTENANCE SENIOR SERGEANT DISTRIBUTION

	E7	E8	E9	TOTAL
CURRENT (TAADS) 67Z	1245	322	18	1585
PROPOSED 67Z	801	332	34	1167
CURRENT OPERATING 67Z	1056	308	32	1396

POWERPLANT REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 68B	277	246	162	61	746
PROPOSED 68B	263	246	176	0	685
CURRENT OPERATING 68B	170	235	178	64	647

POWERTRAIN REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 68D	214	145	65	21	445
PROPOSED 68D	156	159	109	0	424
CURRENT OPERATING 68D	161	178	94	29	462

AIRCRAFT ELECTRICIAN DISTRIBUTION*

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 68F	150	117	89	18	374
PROPOSED 68F	140	130	86	38	394
CURRENT OPERATING 68F	128	108	122	31	389

*Recommended for inclusion in CMF 28

AIRCRAFT STRUCTURAL REPAIRER DISTRIBUTION

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 68G	414	366	322	85	1187
PROPOSED 68G	406	396	300	0	1102
CURRENT OPERATING 68G	583	330	356	134	1404

AIRCRAFT PNEUDRAULICS REPAIRER DISTRIBUTION *

	E3	E4	E5	E6	TOTAL
CURRENT (TAADS) 68H	137	65	41	5	248
PROPOSED 68H	72	120	51	25	268
CURRENT OPERATING 68H	112	66	66	11	255

*Recommended for elimination

AIRCRAFT COMPONENT REPAIR SUPERVISOR DISTRIBUTION

	E6	E7	TOTAL
CURRENT (TAADS) 68K	0	206	206
PROPOSED 68K	297	207	504
CURRENT OPERATING 68K	0	151	151

AIRCRAFT ARMAMENT REPAIRER DISTRIBUTION

	E3	E4	E5	E6	E7	TOTAL
CURRENT (TAADS)						
68J	274	312	123	164	0	873
68M	207	288	114	79	0	688
TOTAL	481	600	237	243	0	1561
PROPOSED						
68J	264	272	190	176	97	999
68M	219	213	160	0	0	592
TOTAL	483	485	350	176	97	1591
CURRENT OPERATING						
68J	253	168	150	150	0	721
68M	219	219	188	59	0	685
TOTAL	472	387	338	209	0	1406

CMF 67
TDA DISTRIBUTION

MOS	CURRENT E3	E4	E5	E6*	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
66G												11	26			37
66H												5	13			18
66M												22	58			80
66T												4	8			12
66U												0	33			33
66V												7	13			20
66X**												0	0			0
66Y											5	16				21
66 Series Total											54	167				221
67Z					336	164	18	518					213	155	30	398
67G	21	61	146	111				339	75	85	45	9	24			238
67H	Included in 67G							0	12	13	6	6				37
67N	17	52	247	211				527	127	113	78	113				431
67T	0	1	0	20				21	0	1	0	5				6
67U	8	7	20	124				159	9	41	40	36				126
67V	6	13	25	43				87	15	22	7	23				67
67X**				6				6				4				4
67Y	7	12	25	62				106	16	19	9	42				86
67 Series Total	59	146	463	577	336	164	18	1763	254	294	185	238	237	155	30	1393
68B	3	9	7	21				40	5	13	1					19
68D	2	5	6	14				27	4	5	4					13
68G	6	17	7	40				70	10	16	4					30
68F	5	6	8	16				35	5	9	5	17				36
68H	1	5	3	4				13	3	3	3	3				12
68J	4	7	2	69				82	10	12	8	83	56			169
68M	15	20	6	36				77	9	10	5					24
68K					90			90				76	69			145
68 Series Total	36	69	39	200	90			434	46	68	30	179	125			448
CMF TOTAL	95	215	502	777	426	164	18	2197	300	362	269	584	362	155	30	2062

*MOS 67W redistributed into 57 series MOS

88 MOS proposed for Reserve Forces only.

CMF 67
TOE DISTRIBUTION

MOS	CURRENT E3	E4	E5	E6*	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
66G											11	11				22
66H											8	11				19
66N											143	205				348
66T											12	12				24
66U											0	98				98
66V											79	132				211
66X											0	0				0
66Y											60	94				154
66 Series Total											313	563				876
67Z					909	158		1067					588	177	4	769
67G	38	74	229	54				395	70	54	40	12	28			204
67H								0	71	69	38	7				185
67N	555	745	1970	447				3717	1276	1174	824	200				3474
67T	6	12	72	54				144	48	36	30	6				120
67U	533	310	233	373				1449	531	482	333	100				1446
67V	288	687	743	254				1972	673	624	421	105				1823
67X								0								0
67Y	493	465	663	172				1793	619	622	380	112				1733
67 Series Total	1913	2293	3910	1354	909	158	0	10537	3288	3061	2066	542	616	177	4	9754
68B	274	237	155	40				706	258	233	175					666
68D	212	140	59	7				418	152	154	105					411
68G	408	349	315	45				1117	396	380	296					1072
68F	145	111	81	2				339	135	121	81	21				358
68H	136	60	38	1				235	69	117	48	22				256
68J	270	305	121	95				791	254	260	182	93	41			830
68M	192	268	108	43				611	210	203	155					568
68K					116			116				221	138			359
68 Series Total	1637	1470	877	233	116	0	0	4333	1474	1468	1042	357	179			4520
CMF TOTAL	3550	3763	4787	1587	1025	158	0	14870	4762	4529	3421	1462	795	177	4	15150

*MOS 67W redistributed into 67 series MOS

**MOS proposed for Reserve Forces only

*PRESENT AUTHORIZATIONS (TAADS)
PERCENTAGE DISTRIBUTION BY TOE-TDA

GRADE	67 SERIES MOS TOE	67 SERIES MOS TDA	67 SERIES MOS TOTAL	68 SERIES MOS TOE	68 SERIES MOS TDA	68 SERIES MOS TOTAL	CMF 67 AGGREGATE TOE	CMF 67 AGGREGATE TDA	CMF 67 AGGREGATE TOTAL
E9	0	18/100%	18	0	0	0	0	18/100%	18
E8	158/49%	164/51%	322	0	0	0	158/49%	164/51%	322
E7	909/73%	336/27%	1245	116/56%	90/44%	206	1025/71%	426/29%	1451
E6	1354/70%	577/30%	1931	233/54%	200/46%	433	1587/67%	777/33%	2364
E5	3910/89%	463/11%	4373	877/96%	39/4%	916	4787/91%	502/9%	5289
E4	2293/94%	146/6%	2439	1470/96%	69/4%	1539	3763/95%	215/5%	3978
E3	1913/97%	59/3%	1972	1637/98%	36/2%	1673	3550/97%	95/3%	3645
TOTAL	10537/86%	1763/14%	12300	4333/91%	434/9%	4767	14870/87%	2197/13%	17067

PROPOSED AUTHORIZATIONS

GRADE	66 SERIES MOS TOE	66 SERIES MOS TDA	66 SERIES MOS TOTAL	67 SERIES MOS TOE	67 SERIES MOS TDA	67 SERIES MOS TOTAL
E9				4/12%	30/88%	34
E8				177/53%	155/47%	332
E7				616/72%	237/28%	853
E6	563/77%	167/23%	730	542/69%	238/31%	780
E5	313/85%	54/15%	367	2066/92%	185/8%	2251
E4				3061/91%	294/9%	3355
E3				3288/93%	254/7%	3542
TOTAL	876/80%	221/20%	1097	9754/88%	1393/12%	11147

GRADE	68 SERIES MOS TOE	68 SERIES MOS TDA	68 SERIES MOS TOTAL	CMF 67 AGGREGATE TOE	CMF 67 AGGREGATE TDA	CMF 67 AGGREGATE TOTAL
E9	0	0	0	4/12%	30/88%	34
E8	0	0	0	177/53%	155/47%	332
E7	179/59%	125/41%	304	795/69%	362/31%	1157
E6	357/67%	179/33%	536	1462/71%	584/29%	2046
E5	1042/97%	30/3%	1072	3421/93%	269/7%	3690
E4	1468/96%	68/4%	1536	4529/93%	362/7%	4891
E3	1474/97%	46/3%	1520	4762/94%	300/6%	5062
TOTAL	4520/91%	448/9%	4968	15150/88%	2062/12%	17212

EXCLUDES TTHS

* TI Positions included in 67 Series totals

CURRENT TDA AUTHORIZATIONS

(% of Total Authorizations in TDA Activities)

MOS	E5	E6	E7	E8	E9	E3-E9 TOTAL
67G	38.9	67.3				46.2
67N	11.1	32.1				12.4
67T	0	27.0				12.7
67U	7.9	24.9				9.9
67V	3.3	14.5				4.2
67Y	3.6	26.5				5.6
67Z	N/A	N/A	27.0	50.9	100.0	32.7
67 Total	10.6	29.9	27.0	50.0	100.0	14.3
68B	4.3	34.4				5.4
68D	9.2	66.7				6.1
68G	2.2	47.1				5.9
68F	9.0	88.9				9.4
68H	7.3	80.0				5.2
68J	1.6	42.1				9.4
68M	5.3	45.6				11.2
68K	N/A	N/A	43.7			43.7
68 Total	4.3	46.2	43.7	N/A	N/A	9.1
CMF Total	9.5	32.9	29.4	50.9	100.0	12.9

PROPOSED TDA AUTHORIZATIONS

(% of Total Authorizations in TDA Activities)

MOS	E5	E6	E7	E8	E9	E3-E9 TOTAL
66G	50.0	70.3				62.7
66H	38.5	54.2				48.6
66N	13.3	22.1				18.7
66T	25.0	40.0				33.3
66U	N/A	25.2				25.2
66V	8.1	9.0				8.7
66Y	7.7	14.5				12.0
66 Total	14.7	22.9				20.1
67G	63.5	42.9	46.2			53.8
67H	13.6	46.2				16.7
67N	8.6	36.1				11.0
67T	0	45.5				4.8
67U	10.7	26.5				8.0
67V	1.6	18.0				3.5
67Y	2.3	27.3				4.7
67Z	N/A	N/A	26.6	46.7	88.2	34.1
67 Total	8.2	30.5	27.8	46.7	88.2	12.5
68B	0.6					2.8
68D	3.7					3.1
68G	1.3					2.7
68F	5.8	44.7	N/A			9.1
68H	5.9	12.0	N/A			4.5
68J	4.2	47.2	57.7			16.9
68M	3.1	N/A				4.1
68K	N/A	25.6	33.3			28.8
68 Total	2.8	33.4	41.1			9.0
CMF Total	7.3	28.5	31.3	46.7	88.2	12.0

CURRENT AND PROPOSED AUTHORIZATIONS

	E3	E4	E5	E6	E7	E8	E9	TOTAL
PROPOSED	5062	4891	3690	2046	1157	332	34	17212
CURRENT TAADS	3645	3978	5289	2364	1451	322	18	17067
DIFFERENCE	+1417	+913	-1599	-318	-294	+10	+16	+145

CMF 67 GRADE AVERAGE

	CURRENT	PROPOSED
CMF 67 Total	4.71	4.45
67 SERIES MOS THROUGH E7	4.84	4.39
68 SERIES MOS THROUGH E7	4.15	4.31
67 SERIES MOS THROUGH E6	4.58	4.19
68 SERIES MOS THROUGH E6	4.02	4.13

CMF 67 GRADE DISTRIBUTION

	E3	E4	E5	E6	E7	E8	E9	TOTAL
CURRENT (TAADS)	3645	3978	5289	2364	1451	322	18	17067
%	21.3%	23.3%	31.0%	13.9%	8.5%	1.9%	.1%	100%
PROPOSED	5062	4891	3690	2046	1157	322	34	17212
%	29.4%	28.4%	21.4%	11.9%	6.7%	2.0%	.2%	100%
CURRENT OPERATING*	4929	4259	4666	2521	1438	308	32	18153
%	27.1%	23.5%	25.7%	13.9%	7.9%	1.7%	.2%	100%

*ME JUNE 79 - EXCLUDES TTHS

CMF 67 AGGREGATE AUTHORIZATIONS

MOS	CURRENT*	PROPOSED**	DIFFERENCE	
67G	734	501	-233	
67H	N/A	259	+259	+ 26
67N	4244	4333	+ 89	
67T	165	162	- 3	
67U	1608	1703	+ 95	
67V	2059	2121	+ 62	
67X	6	4	- 2	
67Y	1899	1994	+ 95	+336
67Z	1585	1167	-418	-418
TOTAL	12300	12444		- 56
68B	746	685	- 61	
68D	445	424	- 21	
68G	1187	1102	- 85	
68K	206	504	+298	+131
68F	374	394	+ 20	+ 20
68H	248	268	+ 20	+ 20
68J	873	999	+126	
68M	688	592	- 96	+ 30
TOTAL	4767	4968		+201

* 67W merged with 67Z at E7 and 67 series TIs at E6.
**66 series TIs merged with respective 67 series MOS for this comparison.

COMPARISON OF CMF 67
CURRENT AND PROPOSED AUTHORIZATIONS

MOS	CURRENT	PROPOSED	DIFFERENCE	
		E9		
67Z	18	34	+ 16	
				+ 16
		E8		
67Z	322	332	+ 10	
				+ 10
		E7		
67G	N/A	52	+ 52	
67W	Merged with 67Z	N/A	0	
67Z	1245	801	-444	-392
68J	N/A	97	+ 97	
68K	206	207	+ 1	+ 98
				-294
		E6		
66G	N/A	37	+ 37	
66H	N/A	24	+ 24	+ 61
66N	N/A	263	+263	
66T	N/A	20	+ 20	
66U	N/A	131	+131	
66V	N/A	145	+145	
66X	N/A	0	0	
66Y	N/A	110	+110	+669
67G	165	21	-144	
67H	N/A	13	+ 13	-131
67N	658	313	-345	
67T	74	11	- 63	
67U	497	136	-361	
67V	297	128	-169	
67X	6	4	- 2	
67Y	234	154	- 80	
67W	Merged with 67 Series	N/A	0	-1020

68B	61	N/A	- 61	
68D	21	N/A	- 21	
68G	85	N/A	- 85	
68K	N/A	297	+297	+130
68F	18	38	+ 20	+ 20
68H	5	25	+ 20	+ 20
68J	164	176	+ 12	
68M	79	N/A	- 79	- 67
				-318

E5

66G	N/A	22	+ 22	
66H	N/A	13	+ 13	+ 35
66N	N/A	165	+165	
66T	N/A	16	+ 16	
66V	N/A	86	+ 86	
66Y	N/A	65	+ 65	+332
67G	375	85	-290	
67H	N/A	44	+ 44	-246
67N	2217	902	-1315	
67T	72	30	- 42	
67U	253	373	+120	
67V	768	428	-340	
67X	0	0	0	
67Y	688	389	-299	-1876
68B	162	176	+ 14	
68D	65	109	+ 44	
68G	322	300	- 22	
68F	89	86	- 3	
68H	41	51	+ 10	
68J	123	190	+ 67	
68M	114	160	+ 46	+156
				-1599

E4

67G	135	139	+ 4	
67H	N/A	82	+ 82	+ 86
67N	797	1287	+490	
67T	13	37	+ 24	
67U	317	523	+206	
67V	700	646	- 54	
67X	0	0	0	
67Y	477	641	+164	+830

68B	246	246	0	
68D	145	159	+ 14	
68G	366	396	+ 30	
68F	177	130	+ 13	
68H	65	120	+ 55	
68J	312	272	- 40	
68M	288	213	- 75	- 3
				+913

E3

67G	59	145	+ 86	
67H	N/A	83	+ 83	+169
67N	572	1403	+831	
67T	6	48	+ 42	
67U	541	540	- 1	
67V	294	688	+394	
67X	0	0	0	
67Y	500	635	+135	+1401
68B	277	263	- 14	
68D	214	156	- 58	
68G	414	406	- 3	
68F	150	140	- 10	
68H	137	72	- 65	
68J	274	264	- 10	
68M	207	219	+ 12	-153
				+1417
				+145

COMPARISON OF CURRENT TAADS AND OPERATING STRENGTH

	E3	E4	E5	E6	E7	E8	E9	TOTAL
Operating Strength*	4929	4259	4666	2521	1438	308	32	18153
Current TAADS	3645	3978	5289	2364	1451	322	18	17067
Difference	+1284	+281	-623	+157	-13	-14	+14	+1086

*ME JUNE 79

COMPARISON OF CURRENT TAADS AND OPERATING STRENGTH

MOS	CURRENT	OPERATING*	DIFFERENCE	
		E9		
67Z	18	32	+14	
				+ 14
		E8		
67Z	322	308	-14	
				-14
		E7		
67W	(merged with 67Z)	231	+231	
67Z	1245	1056	-189	
68K	206	151	- 55	
				-13
		E6		
67G	165	93	- 72	
67N	658	567	- 91	
67T	74	29	- 45	
67U	497	414	- 83	
67V	297	287	- 10	
67X	6	33	+ 27	
67Y	234	152	- 82	
67W	(merged with 67 Series MOS)	468	+468	
				+112
68B	61	64	+ 3	
68D	21	29	+ 8	
68G	85	134	+ 49	
68F	18	31	+ 13	
68H	5	11	+ 6	
68J	164	150	- 14	
68M	79	59	- 20	+45

*ME JUNE 79

MOS	CURRENT	OPERATING*	DIFFERENCE	
		E5		
67G	375	317	- 58	
67N	2217	1624	-593	
67T	72	4	- 68	
67U	253	347	+ 94	
67V	768	629	-139	
67X	0	34	+ 34	
67Y	688	555	-133	
67W	0	2	+ 2	
				-861
		E5		
68B	162	178	+ 16	
68D	65	94	+ 29	
68G	322	356	+ 34	
68F	89	122	+ 33	
68H	41	66	+ 25	
68J	123	150	+ 27	
68M	114	188	+ 74	
				+238
		E4		
67G	135	177	+ 42	
67N	797	877	+ 80	
67T	13	1	- 12	
67U	317	500	+183	
67V	700	675	- 25	
67X	0	75	+ 75	
67Y	477	650	+173	
				+516
68B	246	235	- 11	
68D	145	178	+ 33	
68G	366	330	- 36	
68F	117	108	- 9	
68H	65	66	+ 1	
68J	312	168	-144	
68M	288	219	- 69	
				-235

E3

67G	59	122	+ 63	
67N	572	1288	+716	
67T	6	0	- 6	
67U	541	581	+ 40	
67V	294	762	+468	
67X	0	34	+ 34	
67Y	500	516	+ 16	
				+1331
68B	277	170	-107	
68D	214	161	- 53	
68G	414	583	+169	
68F	150	128	- 22	
68H	137	112	- 25	
68J	274	253	- 21	
68M	207	219	+ 12	
				-47

*ME JUNE 79

COMPARISON OF PROPOSED AUTHORIZATIONS AND OPERATING STRENGTH

	E3	E4	E5	E6	E7	E8	E9	TOTAL
Operating Strength*	4929	4259	4666	2521	1438	308	32	18153
Proposed Structure	5062	4891	3690	2046	1157	332	34	17212
Difference	+133	+632	-976	-475	-281	+24	+2	-941

* Month End June 79

COMPARISON OF
PROPOSED AUTHORIZATIONS AND OPERATING STRENGTH

MOS	PROPOSED	OPERATING*	DIFFERENCE	
		E7		
67Z	801	1056	-255	
67G	52	0	+ 52	
67W	0	231	-231	
				- 434
68K	207	151	+ 56	
68J	97	0	+ 97	
				+ 153
				- 281
		E6		
66G	37	N/A	+ 37	
66H	24	N/A	+ 24	+ 61
66N	263	N/A	+263	
66T	20	N/A	+ 20	
66U	131	N/A	+131	
66V	145	N/A	+145	
66X	0	N/A	0	
66Y	110	N/A	+110	+ 669
67G	21	93	- 72	
67H	13	N/A	+ 13	- 59
67N	313	567	-254	
67T	11	29	- 18	
67U	136	414	-278	
67V	128	287	-159	
67X	4	33	- 29	
67Y	154	152	+ 2	
67W	0	468	-468	-1204
68B	N/A	64	- 64	
68D	N/A	29	- 29	
68G	N/A	134	-134	
68K	297	N/A	+297	+ 70
68F	38	31	+ 7	+ 7
68H	25	11	+ 14	+ 14

68J	176	150	+ 26	
68M	N/A	59	- 59	- 33
				- 475

*ME JUNE 79

E5

66G	22	N/A	+ 22	
66H	13	N/A	+ 13	+ 35
66N	165	N/A	+165	
66T	16	N/A	+ 16	
66V	86	N/A	+ 86	
66Y	65	N/A	+ 65	+332
67G	85	317	-232	
67H	44	N/A	+ 44	-188
67N	902	1624	-722	
67T	30	4	+ 26	
67U	373	347	+ 26	
67V	428	629	-201	
67X	0	34	- 34	
67Y	389	555	-166	-1071
68B	176	178	- 2	
68D	109	94	+ 15	
68G	300	356	- 56	
68F	86	122	- 36	
68H	51	66	- 15	
68J	190	150	+ 40	
68M	160	188	- 28	- 82
				-974

E4

67G	139	177	- 38	
67H	82	N/A	+ 82	+ 44
67N	1287	877	+410	
67T	37	1	+ 36	
67U	523	500	+ 23	
67V	646	675	- 29	
67X	0	75	- 75	
67Y	641	650	- 9	+356

68B	246	235	+ 11	
68D	159	178	- 19	
68G	396	330	+ 66	
68F	130	108	+ 22	
68H	120	66	+ 54	
68J	272	168	+104	
68M	213	219	- 6	+232
				+632

E3

67G	145	122	+ 23	
67H	83	N/A	+ 83	+106
67N	1403	1288	+115	
67T	48	0	+ 48	
67U	540	581	- 41	
67V	688	762	- 74	
67X	0	34	- 34	
67Y	635	516	+119	+133
68B	263	170	+ 93	
68D	156	161	- 5	
68G	406	583	-177	
68F	140	128	+ 12	
68H	72	112	- 40	
68J	264	253	+ 11	
68M	219	219	0	-106
				+133

CMF 67 MOS DELETED FROM TAADS

The base document used by the SSG for force computations was a May 1979 TAADS run. Before making computations, however, the SSG deleted 514 positions from this run for reasons indicated on Page B29.

67 CMF MOS DELETED FROM TAADS

MOS	E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL
67G			6		3				9
67N	62	28	79	3	9				181
67U			1						1
67V	3	9	10						22
67W				15		1			16
67X	54	30	29	7	33				153
67Y	4	8	6		2				20
67Z						13	4		17
68B	3	6	5		1				15
68D	3	3							6
68F	2	3	3						8
68G	12	14	9		2				37
68H	3	3							6
68J	9	7	3		4				23
TOTAL	155	111	151	25	54	14	4		514

B 29

1. The MOS totals deleted from TAADS were from the following listed units which were under duplicate listings or were deactivated.

116 ASLT HEL CO	duplicate listing
709 MAINTENANCE	duplicate listing
243 DET HEV HEL	deactivated
478 HVY HEL CO	deactivated
273 HVY HEL CO	deactivated

2. MOS totals also include 132 positions which erroneously listed aviation MOS for Airfield Service, Driver, and Crash Rescue Positions.

CHANGES BETWEEN CURRENT AND PROPOSED AUTHORIZATIONS

DUTY POSITION	CURRENT	PROPOSED	CHANGE
Fixed Wing Repairer (E3-E5)			
67G	569	369	-200
67H	-	209	+209
TOTAL	569	578	+9
Fixed Wign Technical Inspector			
66G	90	59	-31
66H	-	37	+37
TOTAL	90	96	+6
Fixed Wing Supervisor (E6-E7)			
67G	75	73	-2
67H	-	13	+13
TOTAL	75	86	+11
Rotary Wing Repairer (E3-E5)			
67N	3586	3592	+6
67T	91	115	+24
67U	1111	1436	+325
67V	1762	1762	0
67Y	1665	1665	0
TOTAL	8215	8570	+335
Rotary Wing Technical Inspector			
66N	430	428	-2
66T	28	36	+8
66U	85	131	+46
66V	227	231	+4
66Y	177	175	-2
TOTAL	947	1001	+54
Rotary Wing Supervisor (E6-E9)			
67N	228	313	+85
67T (**Incl 24 Crew Chiefs)	46**	11	-35
67U (*Incl 326 Crew Chiefs)	412*	136	-276
67V	70	128	+58
67X	6	4	-2
67Y	57	154	+97
67Z	1585	1167	-418
TOTAL	2404	1913	-491

DUTY POSITION	CURRENT	PROPOSED	CHANGE
Component Repairer (E3-E5)			
68B	685	685	0
68D	424	424	0
68G	1102	1102	0
68H	243	243	0
TOTAL	2454	2454	0
Component Repair Supervisor (E6-E7)			
68K	206	504	+298
68B	61	-	-61
68D	21	-	-21
68G	85	-	-85
68H	5	25	+20
TOTAL	378	529	+151
Aircraft Electrician/Supervisor			
68F (Repairer E3-E5)	356	356	0
68F (Supervisor E-6)	18	38	+20
TOTAL	374	394	+20
Aircraft Armament Repairer (E3-E5)			
68J	709	726	+17
68M	609	592	-17
TOTAL	1318	1318	0
Aircraft Armament Supervisor (E6-E7)			
68J	164	273	+109
68M	79	-	-79
TOTAL	243	273	+30

APPENDIX C

SAMPLE TOE

TOE DESIGNATION 1-117H Command Airplane Company, Theater Army

(1-117H700, Ch. 4)

CURRENT POSITION DATA							SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01	03	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
03	06	Platoon Sergeant	67Z40	E7	NC	3	Platoon Sergeant	67G4F	PLTSGT	NC	3
	07	Airplant Crew Chief	67G2F	E5	NC	21	Util/Cargo Airplane Air Crew Member	67G2F	SGT	NC	6
	07A	added					Util/Cargo Airplane Air Crew Member	67G1F	SP4		6
	07B	added					Util/Cargo Airplane Air Crew Member	67G1F	PFC		9
04	02	Platoon Sgt	67Z40	E7	NC	1	Platoon Sergeant	67G4F	PLTSGT	NC	1
	03	Chief Acft QC Supv	67W4F	E7	NC	1	deleted				
	04	Acft Quality Con Supv	67W3F	E6	NC	3	Util/Cargo Apln Tech Insp	66G3F	SSG	NC	2
	04A	added					Util/Cargo Apln Tech Insp	66G2F	SGT	NC	1
05	02	Acft Maint Sergeant	67Z40	E7	NC	1	Section Chief	67G4F	SFC	NC	1
	03	Airplane Repairer	67G20	E5	NC	3	Util/Cargo Apln Rep	67G20	SGT	NC	3
	05	Airplane Repairer	67G10	E4		3	Util/Cargo Apln Rep	67G10	SP4		4
	06	Airplane Repairer	67G10	E3		3	Util/Cargo Apln Rep	67G10	PFC		5
	07	added					Maintenance Sergeant	67G3F	SSG	NC	2
06	02	Acft Comp Rep Supv	68K40	E7	NC	1	Section Chief	68K40	SFC	NC	1
	02A	Added					Acft Comp Rep Supv	68K30	SSG	NC	1
	03	Aircraft Electrician	68F10	E4		2	Aircraft Electrician	68F20	SGT	NC	1
	03A	added					Aircraft Electrician	68F10	PFC		2
	04	Acft Powerplant Rep	68B10	E4		3	Acft Powerplant Rep	68B20	SGT	NC	1
	04A	added					Acft Powerplant Rep	68B10	SP4		1
	04B	added					Acft Powerplant Rep	68B10	PFC		1
	05	Acft Pneudraulics Rep	68H10	E4		3	Acft Pneudraulics Rep	68H20	SGT	NC	1
	05A	added					Acft Pneudraulics Rep Supv	68H30	SSG	NC	1
	05B	added					Acft Pneudraulics Rep	68H10	PFC		2

TOE DESIGNATION 1-117H (page 2)

CURRENT POSITION DATA							SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
06	06	Acft Structural Rep	68G10	E4		3	Acft Structural Rep	68G20	SGT	NC	1
	06A	added					Acft Structural Rep	68G10	SP4		1
	06B	added					Acft Structural Rep	68G10	PFC		1
	07	Airplane Repairer	67G10	E4		3	transfered to para 05				

TOE DESIGNATION 1-258 Assault Support Helicopter Company (Includes change 14)

(1-258H000)

CURRENT POSITION DATA							SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01		Company Hq									
	01	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
02		Operations Platoon									
	04	Utility Hel Crew Chief	67N2F	E5	NC	1	Transfered to para 06				
	07	Utility Hel Repairer	67N10	E4		1	Transfered to para 06				
04		2 Hel Platoon Hq					2 Helicopter Platoons				
	02	Platoon Sergeant	67Z40	E7	NC	2	Platoon Sergeant	67Z4F	PLTSGT	NC	2
	02A	added					Asst Platoon Sergeant	67U30	SSG	NC	2
05		4 Helicopter Sections					2 Helicopter Platoons				
	04	Medium Hel Crew Chief	67U3F	E6	NC	16	Med Hel Air Crew Member	67U2F	SGT	NC	8
	04A	added					Med Hel Air Crew Member	67U1F	SP4		8
06		Service Platoon Hq									
	03	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	PLT	NC	1
	05	Medium Hel Tech Insp	67U30	E6	NC	2	Medium Hel Tech Insp	67U3F	SSG	NC	5
	06	added					Utility Helicopter Rep	67N20	SGT	NC	1
	06A	added					Utility Helicopter Rep	67N10	PFC		1
	06B	added					Utility Hel Air Crew Mem	67N1F	SP4		1
07		2 Maintenance Sections					1 Maintenance Section				
	01	Maintenance Supervisor	67Z40	E7	NC	2	Maintenance Supervisor	67Z4F	SFC	NC	1
	02	added					Maintenance Sergeants	67U3F	SSG	NC	3
	03	Medium Hel Repairer	67U20	E5	NC	10	Medium Hel Repairer	67U20	SGT	NC	9
	03A	Medium Hel Repairer	67U10	E4		10	Medium Hel Repairer	67U10	SP4		18
	03B	Medium Hel Repairer	67U20	E5		20	Medium Hel Repairer	67U10	PFC		26

TOE DESIGNATION TOE 1-258H Assault Support Helicopter Company

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
09		Acft Sys Repair Section									
	02	Maintenance Supervisor	67Z40	E7	NC	1	Aircraft Comp Rep Supv	68K40	SFC	NC	1
	03	Section Chief	68B30	E6	NC	1	Aircraft Comp Rep Supv	68K30	SSG	NC	1
	06	Aircraft Structural Rep	68G20	E5	NC	2	Aircraft Structural Rep	68G20	SGT	NC	2
	11	Acft Powerplant Repairer	68B20	E5	NC	1	Acft Powerplant Repairer	68B20	SGT	NC	1
	12	Medium Hel Repairer	67U20	E5	NC	2	Transfered to para 07				
	13	Acft Powertrain Repairer	68D20	E5	NC	1	Aircraft Powertrain Rep	68D20	SGT	NC	1
	14	Acft Structural Repairer	68G10	E4		1	Acft Structural Repairer	68G10	SP4		2
	15	Acft Powerplant Repairer	68B10	E4		2	Acft Powerplant Repairer	68B10	SP4		1
	15A	added					Acft Powerplant Repairer	68B10	PFC		1
	16	Acft Instrument Repairer	68F20	E5	NC	1	Aircraft Electrician	68F20	SGT	NC	1
	16A	added					Aircraft Electrician Supv	68F30	SSG	NC	1
	17	Acft Pneudraulics Rep	68H20	E5	NC	1	Aircraft Pneudraulics Rep	68H20	SGT	NC	1
	17A	added					Acft Pneudraulic Rep Supv	68H30	SSG	NC	1
	18	Acft Structural Repairer	68G10	E3		3	Acft Structural Repairer	68G10	PFC		2
	19	Medium Hel Repairer	67U10	E4		3	Transfered to para 07				
	20	Acft Pneudraulics Rep	68H10	E4		1	Aircraft Pneudraulics Rep	68H10	PFC		1
	21	Acft Powertrain Rep	68D10	E4		2	Acft Powertrain Repairer	68D10	SP4		2
	22	Medium Hel Repairer	67U10	E3		8	Transfered to para 07				
	23	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	PFC		1
	24	Aircraft Electrician	68F10	E4		1	Aircraft Electrician	68F10	PFC		1
	26	Utility Hel Repairer	67N10	E4		1	Transfered to para 06				
	27	Medium Hel Tech Insp	67U3F	E6	NC	1	Transfered to para 06				
	30	Aircraft Electrician	68F10	E3		2	Aircraft Electrician	68F10	PFC		2
	31	Aircraft Powertrain	68D10	E3		2	Aircraft Powertrain Rep	68D10	PFC		2
	32	Aircraft Electrician	68F20	E5	NC	1	Aircraft Electrician	68F10	PFC		1

TOE DESIGNATION 7-268T8 Combat Support Aviation Company, Combat Support Aviation Battalion

Airmobile, Armored, Infantry, Infantry (Mechanized) and Airborne Division

		CURRENT POSITION DATA (7-268T800)					SUGGESTED CHANGES				
Para	**Line**	**Duty Position Title**	**MOS Code**	**Grade**	**Br**	**No**	**Duty Position Title**	**MOS Code**	**Grade**	**Br**	**No**
01		Company Headquarters									
	04	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
02		Flight Operations Platoon					transfered to para 07				
	07	UH-60 Crew Chief	67T2F	E5	NC	1					
03		2 Cbt Spt Hel Plt Hq									
	03	Platoon Sergeant	67Z40	E7	NC	2	Platoon Sergeant	67Z4F	PLTSGT	NC	2
	04	UH-60 Crew Chief	67T2F	E5	NC	2	Tac Trans Hel Air Crew Member	67T1F	SP4		2
04		4 Cbt Spt Hel Sec									
	04	Section Sergeant	67T3F	E6	NC	4	Section Sergeant	67T2F	SGT	NC	4
	05	UH-60 Crew Chief	67T2F	E5	NC	8	Tactical Trans Hel Air Crew Member	67T1F	SP4		4
	05A	added					Tactical Trans Hel Air Crew Member	67T1F	PFC		4
05		AVUM Platoon Hq									
	02	Acft Qual Con Supv	67W40	E7	NC	1	deleted				
	03	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	PLTSGT	NC	1
	04	Utility Hel Tech Insp	67T3F	E6	NC	4	Tac Trans Hel Tech Insp	66T3F	SSG	NC	2
	04A	added					Tac Trans Hel Tech Insp	66T2F	SGT	NC	2
06		Acft Comp Rep Sec									
	02	Acft Comp Rep Supv	68K40	E7	NC	1	Acft Comp Rep Supv	68K30	SSG	NC	1
	05	Acft Powerplant Rep	68B10	E4		2	Acft Powerplant Repairer	68B10	SP4		1
	05A	added					Acft Powerplant Repairer	68B10	PFC		1
	06	Acft Structural Repairer	68G10	E4		2	Acft Structural Repairer	68G10	SP4		1
	06A	added					Acft Structural Repairer	68G10	PFC		1

TOE DESIGNATION 7-268T8 (page 2)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
06	09	Helicopter Wpn Sys Rep	68M10	E4		1	Acft Wpns Sys Rep	68M10	SP4		1
	10	Acft Electrician	68F10	E3		1	Acft Electrician	68F10	SP4		1
	11	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	SP4		1
	12	Acft Powertrain Rep	68D10	E3		1	Acft Powertrain Rep	68D10	SP4		1
07		Acft Repair Section									
	02	Maint Supervisor	67T30	E6	NC	1	Maintenance Supv	67T3F	SSG	NC	1
	03	Tac Trans Hel Rep	67T20	E5	NC	1	Tac Trans Hel Rep	67T20	SGT	NC	1
	04	Tac Trans Hel Rep	67T10	E4		2	Tac Trans Hel Rep	67T10	SP4		1
	05	Tac Trans Hel Rep	67T10	E3		1	Tac Trans Hel Rep	67T10	PFC		2
	06	added					Tac Trans Hel Air Crew Mem	67T1F	SP4		1

TOE DESIGNATION TOE 8-137H Medical Air Ambulance Company (Includes change 12)

(8-137H200)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01		Company Headquarters									
	08	Utility Hel Crew Chief	67N2F	E5	NC	1	transfered to para 06				
05		Airfield Service Section									
	01	Airfield Service Supv	67N20	E5	NC	1	Aircraft Fuel Handler Supv	76W20	SGT	NC	1
06		Service Platoon Hq									
	02	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	PLTSGT	NC	1
	03	Utility Hel Tech Insp	67N3F	E6	NC	3	Utility Hel Tech Insp	66N3F	SSG	NC	2
	03A	added					Utility Hel Tech Insp	66N2F	SGT	NC	2
	05	added					Utility Hel Air Crew Mem	67N1F	SP4		1
08		Acft Maint Sec									
	02	Maintenance Supervisor	67Z40	E7	NC	1	Maintenance Supv	67N3F	SSG	NC	1
	02A	added					Maintenance Sergeant	67N3F	SSG	NC	1
	04	Utility Hel Repairer	67N20	E5	NC	4	Utility Hel Rep	67N20	SGT	NC	6
	06	Utility Hel Repairer	67N10	E4		4	Utility Hel Rep	67N10	SP4		5
	07	Utility Hel Repairer	67N10	E3		5	Utility Hel Rep	67N10	PFC		8
09		Acft Comp Repair Sec									
	02	Maintenance Supv	67Z40	E7	NC	1	Acft Components Rep Supv	68K30	SSG	NC	1
	04	Acft Powerplant Rep	68B10	E4		1	Acft Powerplant Rep	68B10	SP4		1
	05	Acft Structural Rep	68G10	E4		1	Acft Structural Rep	68G20	SGT	NC	1
	06	Utility Hel Repairer	67N20	E5	NC	2	transfered to para 08				
	07	Aircraft Electrician	68F10	E3		1	Aircraft Electrician	68F10	SP4		1
	08	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	SP4		1
	09	Acft Powertrain Rep	68D10	E3		1	Acft Powertrain Rep	68D10	SP4		1
	11	Acft Powerplant Rep	68B10	E3		1	Acft Powerplant Rep	68B10	PFC		1
	12	Aircraft Structural Rep	68G10	E3		2	Aircraft Structural Rep	68G10	SP4		1
	12A	added					Aircraft Structural Rep	68G10	PFC		1
	13	Utility Hel Repairer	67N10	E4		2	transfered to para 08				
	14	Utility Hel Repairer	67N10	E3		2	transfered to para 08				
	15	Acft Quality Con Supv	67W3F	E6		1	transfered to para 06				

TOE DESIGNATION TOE 8-137H Medical Air Ambulance Company (Page 2)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	**Line**	**Duty Position Title**	**MOS Code**	**Grade**	**Br**	**No**	**Duty Position Title**	**MOS Code**	**Grade**	**Br**	**No**
10		4 Air Amb Platoons									
	06	Utility Hel Crew Chief	67N2F	E5	NC	24	Utility Hel Air Crew Mem	67N2F	SGT	NC	8
	06A	added					Utility Hel Air Crew Mem	67N1F	SP4		8
	06B	added					Utility Hel Air Crew Mem	67N1F	PFC		8

TOE DESIGNATION TOE 17-87HO Aviation Company, Combat Aviation Battalion,

Armored Div or Infantry Div (Mechanized) (Change 19) (17-87H000)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	**Line**	**Duty Position Title**	**MOS Code**	**Grade**	**Br**	**No**	**Duty Position Title**	**MOS Code**	**Grade**	**Br**	**No**
01		Company Hqs									
	03	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
	13	added					Light Veh Driver	64C10	PFC		1
06		Gen Spt Plt Hq					Para 06 Deleted				
	01	Platoon Leader	15C12	CPT	AR	1	transfered to para 07				
	02	Platoon Sergeant	67Z40	E7	NC	1	transfered to para 07				
	03	Light Veh Driver	64C10	E3		1	transfered to para 01				
07		Utility Spt Sec					Utility Spt Plt				
	01	Section Leader	15C12	LT	AR	1	Platoon Leader	15C12	CPT	AR	1
	02	Pilot UH-1	100B0	WO		8	Pilot UH-1	100B0	WO		22
	06	Utility Hel Crew Chief	67N2F	E5	NC	6	Utility Hel Crew Member	67N2F	SGT	NC	4
	06A	added					Utility Hel Crew Member	67N1F	SP4		4
	06B	added					Utility Hel Crew Member	67N1F	PFC		6
	07	Door Gunner	67N1F	E4	*	6	Door Gunner	67N1F		*	14
	08	added					Platoon Sergeant	67Z4F	PLTSGT	NC	1
	08A	added					Asst Platoon Sergeant	67N30	SSG	NC	1
	09	added					Section Leader	15C12	LT	AR	2
08		Cmd & Con Sec					Para 08 Deleted				
	01	Section Leader	15C12	LT	AR	1	transfered to para 13				
	02	Pilot OH-58	100B0	WO		5	transfered to para 13				
	03	Obsn/Sct Hel Rep	67V20	E5	NC	2	transfered to para 13				
	04	Obsn/Sct Hel Rep	67V10	E4		3	transfered to para 13				
	05	Obsn/Sct Hel Rep	67V10	E3		1	transfered to para 13				
09		AVUM Platoon Hq									
	03	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	PLTSGT	NC	1
	05	Utility Hel Tech Insp	67N3F	E6	NC	4	Utility Hel Tech Insp	66N3F	SSG	NC	2
	05	added					Utility Hel Tech Insp	66N2F	SGT	NC	2
	06	Obsn/Sct Hel Tech Insp	67V3F	E6	NC	5	Obsn/Sct Hel Tech Insp	66V3F	SSG	NC	3
	06A	added					Obsn/Sct Hel Tech Insp	66V2F	SGT	NC	2

TOE DESIGNATION TOE 17-87H0 (page 2)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
10		Acft Maint Sec					Acft Maint Sec				
	01	Acft Maint Sgt	67Z40	E7	NC	1	Section Chief	67N3F	SSG	NC	1
	03	Utility Hel Rep	67N20	E5	NC	4	Utility Hel Rep	67N20	SGT	NC	3
	04	Obsn/Sct Hel Rep	67V20	E5	NC	1	Obsn/Sct Hel Rep	67V20	SGT	NC	1
	05	Utility Hel Rep	67N10	E4		3	Utility Hel Rep	67N10	SP4		3
	06	Obsn/Sct Hel Rep	67V10	E4		1	Obsn/Sct Hel Rep	67V10	SP4		1
	07	Obsn/Sct Hel Rep	67V10	E3		1	Obsn/Sct Hel Rep	67V10	PFC		1
	08	Utility Hel Rep	67N10	E3		3	Utility Hel Rep	67N10	PFC		4
11		Airfield Svc Sec					Airfield Svc Sec				
	01	Airfield Svc Supv	67N20	E5	NC	1	Airfield Svc Supv	76W20	SGT	NC	1
12		Bde Spt Sec					Bde Spt Platoon				
	01	Section Leader	15C12	LT	AR	1	Platoon Leader	15C12	CPT	AR	1
	02	Pilot OH-58	100B0	WO		13	Pilot OH-58	100B0	WO		10
	03	Pilot UH-1	100B0	WO		7	Transfered to para 07				
	07	Obsn/Sct Hel Rep	67V20	E5	NC	6	Obsn/Sct Hel Rep	67V20	SGT	NC	5
	08	Utility Hel Crew Chief	67N2F	E5	NC	4	transfered to para 07				
	09	Obsn/Sct Hel Rep	67V10	E4		7	Obsn/Sct Hel Rep	67V10	SP4		6
	10	Door Gunner	67N1F	E4	*	4	transfered to para 07				
	11	Obsn/Sct Hel Rep	67V10	E3		3	Obsn/Sct Hel Rep	67V10	PFC		5
	12	added					Section Leader	15C12	LT	AR	2
	13	added					Platoon Sergeant	67Z4F	PLTSGT	NC	1
	13A	added					Asst Platoon Sergeant	67V30	SSG	NC	1
13		Div Arty Spt Sec					Cmd/Div Arty Spt Plt				
	01	Section Leader	15C13	LT	FA	1	Platoon Leader	15C13	CPT	FA	1
	02	Pilot OH-58	100B0	WO		8	Pilot OH-58	100B0	WO		10
	03	Pilot UH-1	100B0	WO		6	transfered to para 07				
	07	Obsn/Sct Hel Rep	67V20	E5	NC	4	Obsn/Sct Hel Rep	67V20	E5	NC	5
	08	Util Hel Crew Chief	67N2F	E5	NC	4	transfered to para 07				
	09	Obsn/Sct Hel Rep	67V10	E4		4	Obsn/Sct Hel Rep	67V10	SP4		6
	10	Door Gunner	67N1F	E4	*	4	transfered to para 07				

TOE DESIGNATION TOE 17-87HO (page 3)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
13	11	Obsn/Sct Hel Rep	67V10	E3		2	Obsn/Sct Hel Rep	67V10	PFC		5
	12	added					Section Leader	15C13	LT		2
	13	added					Platoon Sergeant	67Z4F	PLTSGT	NC	1
	13A	added					Asst Platoon Sergeant	67V30	SSG	NC	1
14		Acft Comp Rep Sec					Acft Comp Rep Sec				
	02	Acft Comp Rep Supv	68K40	E7	NC	1	Section Chief	68K40	SFC	NC	1
	02A	added					Acft Comp Rep Supv	68K30	SSG	NC	1
	03	Acft Pwrplnt Tech Insp	68B30	E6	NC	1	deleted				
	04	Acft Quality Con Supv	67W3F	E6	NC	1	transfered to para 09				
	05	Acft Struct Rep TI	68G30	E6	NC	1	deleted				
	06	Acft Struct Rep	68G20	E5	NC	1	Acft Struct Rep	68G20	SGT	NC	1
	08	Acft Pwrplnt Rep	68B10	E4		1	Acft Pwrplnt Rep	68B10	SP4		1
	09	Acft Struct Rep	68G10	E4		1	Acft Struct Rep	68G10	SP4		2
	10	Acft Electrician	68F10	E3		1	Acft Electrician	68F10	SP4		1
	11	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	SP4		1
	12	Acft Pwrplnt Rep	68B10	E3		1	Acft Pwrplnt Rep	68B10	PFC		1
	13	Acft Pwrtrain Rep	68D10	E4		1	Acft Pwrtrain Rep	68D20	SGT	NC	1
	14	Acft Struct Rep	68G10	E3		2	Acft Struct Rep	68G10	PFC		1
	15	Acft Pwrtrain Rep	68D10	E3		1	Acft Pwrtrain Rep	68D10	PFC		1

TOE DESIGNATIO! 17-108H Air Cavalry Troop, ARMD Cavalry Squadron (Includes change 20)

(17-108H000)

CURRENT POSITION DATA							SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01	04	Obsn/Sct Hel Crew Chief	67V2F	E5	NC	1	transfered to para 04				
03	02	Platoon Sergeant	67Z4F	E7	NC	1	Platoon Sergeant	67Z4F	PLTSGT	NC	1
	03	Obsn/Sct Hel Repairer	67V1F	E4		1	transfered to para 04				
04	04	Obsn/Sct Hel Pepairer	67V2F	E5	NC	3	Obsn/Sct Hel Repairer	67V20	SGT	NC	2
	07	Obsn/Sct Hel Repairer	67V1F	E4		4	Obsn/Sct Hel Repairer	67V10	SP4		4
	08	Obsn/Sct Hel Repairer	67V1F	E3		1	Obsn/Sct Hel Repairer	67V10	PFC		4
05	04	Utility Hel Crew Chief	67N2F	E5	NC	5	Utility Hel Air Crew Mem	67N2F	SGT	NC	1
	04A	added					Utility Hel Air Crew Mem	67N1F	SP4		2
	04B	added					Utility Hel Air Crew Mem	67N1F	PFC		2
07	03	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	PLTSGT	NC	1
	04	Attack Hel Repairer	67Y20	E5	NC	1	Attack Hel Rep	67Y10	SP4		1
08	04	Attack Hel Repairer	67Y20	E5	NC	3	Attack Hel Repairer	67Y20	SGT	NC	2
	06	Attack Hel Repairer	67Y10	E4		2	Attack Hel Repairer	67Y10	SP4		4
	07	Attack Hel Repairer	67Y10	E3		3	Attack Hel Repairer	67Y10	PFC		2
09	02	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	SFC	NC	1
	03	added					Utility Hel Tech Insp	66N3F	SSG	NC	1
	04	added					Utility Hel Tech Insp	66N2F	SGT	NC	1
	05	added					Obsn/Sct Hel Tech Insp	66V3F	SSG	NC	1
	06	added					Obsn/Sct Hel Tech Insp	66V2F	SGT	NC	1
	07	added					Attack Hel Tech Insp	66Y3F	SSG	NC	1
	08	added					Attack Hel Tech Insp	66Y2F	SGT	NC	1

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TOE DESIGNATION 17-108H (page 2)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
10	03	Acft Fire Ctl TI	68J30	E6	NC	1	transfered to para 13				
	04	added					Section Chief	67Y3F	SSG	NC	1
	05	Utility Hel Tech Insp	67N3F	E6	NC	1	transfered to para 09				
	06	Utility Hel Crew Chief	67N2F	E5	NC	1	Utility Hel Air Crew Mem	67N1F	SP4		1
	06A	added					Utility Hel Air Crew Mem	67N1F	PFC		1
	07	Attack Hel Rep	67Y20	E5	NC	2	Attack Hel Rep	67Y20	SGT	NC	1
	08	Acft Wpns Sys Rep	68M20	E5	NC	1	transfered to para 13				
	10	Utility Hel Rep	67N20	E5	NC	2	Utility Hel Rep	67N20	SGT	NC	2
	11	Attack Hel Rep	67Y10	E4		2	Attack Hel Rep	67Y10	SP4		2
	12	Acft Wpns Sys Rep	68M10	E4		2	transfered to para 13				
	15	Utility Hel Rep	67N10	E4		2	Utility Hel Rep	67N10	SP4		1
	18	added					Maintenance Supv	67N3F	SSG	NC	1
	20	Obsn/Sct Hel TI	67V3F	E6	NC	2	transfered to para 09				
	21	Attack Hel Tech Insp	67Y3F	E6	NC	2	transfered to para 09				
	24	added					Maintenance Supv	67V3F	SSG	NC	1
	27	Attack Hel Rep	67Y10	E3		1	Attack Hel Rep	67Y10	PFC		2
	28	Utility Hel Rep	67N10	E3		2	Utility Hel Rep	67N10	PFC		3
	33	Acft Wpns Sys Rep	68M10	E3		2	transfered to para 13				
	34	Obsn/Sct Hel Rep	67V10	E4		1	Obsn/Sct Hel Rep	67V10	SP4		1
	35	Obsn/Sct Hel Rep	67V10	E3		1	Obsn/Sct Hel Rep	67V10	PFC		1
	36	Acft Fire Ctl Rep	68J20	E5	NC	1	transfered to para 13				
	37	Acft Fire Ctl Rep	68J10	E4		2	transfered to para 13				
	38	Acft Fire Ctl Rep	68J10	E3		2	transfered to para 13				
11	04	Utility Hel Crew Chief	67N2F	E5	NC	1	transfered to para 10				
	08	Airfield Svc Crmn	67N10	E3		2	Aircraft Fuel Handler	76W10	PFC		2
12	02	Maintenance Supv	67Z40	E7	NC	1	Section Chief	68K40	SFC	NC	1
	03	Acft Qual Ctl Supv	67W3F	E6	NC	1	transfered to para 09				
	04	Acft Powerplant Rep	68B10	E4		1	Acft Powerplant Rep	68B10	SP4		1
	05	added					Acft Comp Rep Supv	68K30	SSG	NC	1
	06	Acft Struct Rep	68G20	E5	NC	1	Acft Struct Rep	68G20	SGT	NC	1
	09	Acft Electrician	68F10	E3		1	Acft Electrician	68F10	SP4		1

TOE DESIGNATION 17-108H (page 3)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
12	10	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	SP4		1
	11	Acft Powertrain Rep	68D10	E3		1	Acft Powertrain Rep	68D10	PFC		1
	12	Acft Struct Rep	68G10	E4		1	Acft Struct Rep	68G10	SP4		2
	13	Acft Powertrain Rep	68D10	E4		1	Acft Powertrain Rep	68D20	SGT	NC	1
	15	Acft Struct Rep	68G10	E3		2	Acft Struct Rep	68G10	PFC		1
	19	Acft Fire Ctl Rep	68J10	E4		1	transfered to para 13				
13		Aircraft Armament Repair	Sec								
	01	added					Section Chief	68J30	SSG	NC	1
	02	added					Acft Fire Control Rep	68J20	SGT	NC	1
	03	added					Acft Weapons Sys Rep	68M20	SGT	NC	1
	04	added					Acft Weapons Sys Rep	68M10	SP4		2
	05	added					Acft Fire Control Rep	68J10	SP4		3
	06	added					Acft Fire Control Rep	68J10	PFC		2
	07	added					Acft Weapons Sys Rep	68M10	PFC		2

TOE DESIGNATION 17-387H7, Attack Hel Co, Attack Hel Battalion (Includes change 5)

(17-387H710)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01	03	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
	08	Vehicle Driver	67Y10	E4		1	Vehicle Driver	64C10	SP4		1
02	06	Utility Hel Crew Chief	67N2F	E5	NC	2	transfered to para 07				
03	08	Platoon Sergeant	67Z40	E7	NC	3	Platoon Sergeant	67Z4F	PLTSGT	NC	3
	09	Attack Hel Repairer	67Y20	E5	NC	9	Attack Hel Repairer	67Y20	SGT	NC	6
	10	Attack Hel Repairer	67Y10	E4		5	Attack Hel Repairer	67Y10	SP4		6
	11	Attack Hel Repairer	67Y10	E3		7	Attack Hel Repairer	67Y10	PFC		9
04	02	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	SFC	NC	1
05	04	Obsn/Sct Hel Repairer	67V20	E5	NC	6	Obsn/Sct Hel Repairer	67V20	SGT	NC	3
	05	Obsn/Sct Hel Repairer	67V10	E4		4	Obsn/Sct Hel Repairer	67V10	SP4		3
	07	Obsn/Sct Hel Repairer	67V10	E3		2	Obsn/Sct Hel Repairer	67V10	PFC		6
06	02	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	SFC	NC	1
	03	Acft Qual Con Supv	67W3F	E6	NC	1	Utility Hel Tech Insp	66N3F	SSG	NC	1
	04	Attack Hel Tech Insp	67Y3F	E6	NC	3	Attack Hel Tech Insp	66Y3F	SSG	NC	2
	04A	added					Attack Hel Tech Insp	66Y2F	SGT	NC	1
	05	Obsn/Sct Hel Tech Insp	67V3F	E6	NC	2	Obsn/Sct Hel Tech Insp	66V3F	SSG	NC	1
	05A	added					Obsn/Sct Hel Tech Insp	66V2F	SGT	NC	1
	06	Utility Hel Crew Chief	67N2F	E5	NC	1	transfered to para 07				
07	02	Section Chief	67Z40	E7	NC	1	Section Chief	67Y3F	SSG	NC	1
	04	Attack Hel Repairer	67Y20	E5	NC	6	Attack Hel Repairer	67Y20	SGT	NC	4
	05	Utility Hel Repairer	67N20	E5	NC	1	Utility Hel Repairer	67N20	SGT	NC	1
	05A	added					Utility Hel Repairer	67N10	SP4		1
	07	Attack Hel Repairer	67Y10	E4		3	Attack Hel Repairer	67Y10	SP4		8
	10	Utility Hel Repairer	67N10	E4		1	Utility Hel Repairer	67N10	PFC		1
	12	Attack Hel Repairer	67Y10	E3		4	Attack Hel Repairer	67Y10	PFC		8
	14	added					Obsn/Sct Hel Rep Supv	67V3F	SSG	NC	1
	15	added					Obsn/Sct Hel Rep	67V20	SGT	NC	1

TOE DESIGNATION 17-387H (page 2)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
07	16	added					Obsn/Sct Hel Rep	67V10	SP4		2
	17	added					Obsn/Sct Hel Rep	67V10	PFC		2
	18	added					Attack Hel Rep Supv	67Y3F	SSG	NC	2
	19	added					Utility Hel Air Crew Mem	67N2F	SGT	NC	1
	20	added					Utility Hel Air Crew Mem	67N1F	SP4		1
	21	added					Utility Hel Air Crew Mem	67N1F	PFC		1
09	01	Acft Comp Repair Supv	68K40	E7	NC	1	Section Chief	68J40	SFC	NC	1
	02	Acft Wpn Sys Rep	68M20	E5	NC	2	Acft Wpns Sys Rep	68M20	SGT	NC	2
	03	Acft Wpn Sys Rep	68M10	E4		2	Acft Wpns Sys Rep	68M10	SP4		3
	04	Acft Wpn Sys Rep	68M10	E3		3	Acft Wpns Sys Rep	68M10	PFC		3
	05	Acft Wpn Sys Rep Supv	68M30	E6	NC	1	deleted				
	06	Acft Fire Ctl Rep Supv	68J30	E6	NC	1	Acft Armament Supv	68J30	SSG	NC	1
	07	Acft Fire Ctl Rep	68J20	E5	NC	2	Acft Fire Ctl Rep	68J20	SGT	NC	3
	08	Acft Fire Ctl Rep	68J10	E4		2	Acft Fire Ctl Rep	68J10	SP4		3
	09	Acft Fire Ctl Rep	68J10	E3		4	Acft Fire Ctl Rep	68J10	PFC		3
10	02	Maintenance Supv	67Z40	E7	NC	1	Section Chief	68K40	SFC	NC	1
	03	Acft Fire Ctl TI	68J30	E6	NC	1	deleted				
	04	Attack Hel Repairer	67Y20	E5	NC	3	transfered to para 07				
	05	Acft Structural Rep	68G20	E5	NC	2	Acft Structural Rep	68G20	SGT	NC	2
	06	Obsn/Sct Hel Repairer	67V20	E5	NC	2	transfered to para 07				
	07	Acft Powerplant Repairer	68B10	E4		1	Acft Powerplant Rep	68B10	SP4		1
	08	Acft Structural Repairer	68G10	E4		1	Acft Structural Rep	68G10	SP4		2
	09	Acft Fire Ctl Rep	68J10	E4		1	transfered to para 09				
	11	Obsn/Sct Hel Repairer	67V10	E4		2	transfered to para 07				
	12	Utility Hel Repairer	67N10	E4		1	transfered to para 07				
	13	Attack Hel Repairer	67Y10	E4		2	transfered to para 07				
	14	Aircraft Electrician	68F10	E3		1	Aircraft Electrician	68F10	SP4		1
	15	Acft Wpns Sys Rep	68M10	E3		1	transfered to para 09				
	16	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	SP4		1
	17	Obsn/Sct Hel Rep	67V10	E3		1	transfered to para 07				
	18	Acft Powertrain Rep	68D10	E3		1	Acft Powertrain Rep	68D10	SP4		1

TOE DESIGNATION 17-387H (page 3)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
10	19	Acft Powerplant Rep	68B10	E3		1	Acft Powerplant Rep	68B10	PFC		1
	20	Acft Structural Rep	68G10	E3		3	Acft Structural Rep	68G10	PFC		2
	21	Attack Hel Rep	67Y10	E3		2	transfered to para 07				
	22	added					Acft Comp Rep Supv	68K30	SSG	NC	1

TOE DESIGNATION 30-79H5, Military Intelligence Company, Aerial Surveillance (OV-10)

(30-79H500 change 8)

CURRENT POSITION DATA							SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
11	02	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67G4F	PLTSGT	NC	1
	03	Acft Quality Cont Supv	67W3F	E6	NC	1	Obsn Airplane Tech Insp	66H3F	SSG	NC	2
	08	Airplane Tech Insp	67G3F	E6	NC	3	Obsn Airplane Tech Insp	66H2F	SGT	NC	2
12	02	Maintenance Supervisor	67G30	E6	NC	1	Section Chief	67G4F	SFC	NC	1
	02A	added					Maintenance Supv	67H3F	SSG	NC	2
	03	Airplane Crew Chief	67G20	E5	NC	18	deleted				
	04	Airplane Repairer	67G20	E5	NC	3	Obsn Airplane Repairer	67H20	SGT	NC	6
	05	Airplane Repairer	67G10	E4		5	Obsn Airplane Repairer	67H10	SP4		13
	06	Airplane Repairer	67G10	E3		3	Obsn Airplane Repairer	67H10	PFC	NC	12
17	02	Chief Acft QC Supv	67W4F	E7	NC	1	deleted				
	04	Maintenance Supervisor	67G30	E6	NC	1	Section Chief	68K30	SSG	NC	1
	11	Acft Powerplant Rep	68B10	E4		1	Acft Powerplant Rep	68B10	SP4		1
	12	Acft Structural Rep	68G10	E4		1	Acft Structural Rep	68G20	SGT	NC	1
	13	Airplane Repairer	67G10	E4		1	transfered to para 12				
	16	Aircraft Electrician	68F10	E3		1	Aircraft Electrician	68F10	SP4		1
	17	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	SP4		1
	18	Acft Powerplant Rep	68B10	E3		1	Acft Powerplant Rep	68B10	PFC		1
	19	Acft Structural Rep	68G10	E3		2	Acft Structural Rep	68G10	PFC		1
	19A	added					Acft Structural Rep	68G10	SP4		1
	20	Airplane Repairer	67G10	E3		1	transfered to para 12				

TOE DESIGNATION 55-167H7, Transportation Helicopter Company

(24 Ship Company) (Includes change 1) (55-167H700)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01	04	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
02	02	Chief Acft QC Supv	67W40	E7	NC	1	deleted				
	03	Medium Hel Tech Insp	67U3F	E6	NC	4	Medium Hel Tech Insp	66U3F	SSG	NC	8
03	04	Utility Hel Crew Chief	67N2F	E5	NC	1	transfered to para 07				
	06	Utility Hel Repairer	67N10	E4		1	transfered to para 07				
06	06	Platoon Sergeant	67Z40	E7	NC	3	Platoon Sergeant	67Z4F	PLTSGT	NC	3
	06A	added					Asst Platoon Sergeant	67U30	SSG	NC	3
	07	Medium Hel Crew Chief	67U3F	E6	NC	24	Med Hel Air Crew Member	67U2F	SGT	NC	12
	07A	added					Med Hel Air Crew Member	67U1F	SP4		12
07	03	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z3F	PLTSGT	NC	1
	17	added					Utility Hel Air Crew Mem	67N1F	SP4		1
	18	added					Utility Hel Repairer	67N10	PFC		1
08		Acft Maint Sec									
	02	Maintenance Supv	67U30	E6	NC	4	Maintenance Sergeant	67U3F	SSG	NC	4
	03	Medium Hel Repairer	67U20	E5	NC	11	Medium Hel Repairer	67U20	SGT	NC	16
	04	Medium Hel Repairer	67U10	E4		17	Medium Hel Repairer	67U10	SP4		25
	05	Medium Hel Rapairer	67U10	E3		26	Medium Hel Repairer	67U10	PFC		40
	06	added					Section Leader	71A00	LT	TC	1
	07	added					Maintenance Supv	67Z4F	SFC	NC	1
09	02	Acft Comp Rep Supv	68K40	E7	NC	1	Acft Comp Rep Supv	68K40	SFC	NC	1
	03	Acft Powertrain Rep Supv	68D30	E6	NC	1	Acft Comp Rep Sergeant	68K30	SSG	NC	2
	04	Aircraft Electrician	68F20	E5	NC	1	Aircraft Electrician	68F20	SGT	NC	2
	05	Acft Pneudraulics Rep	68H20	E5	NC	1	Acft Pneudraulics Rep	68H20	SGT	NC	2
	06	Acft Powerplant Rep	68B20	E5	NC	1	Acft Powerplant Rep	68B20	SGT	NC	2
	07	Acft Powertrain Rep	68D20	E5	NC	1	Acft Powertrain Rep	68D20	SGT	NC	3
	08	Acft Structural Rep	68G20	E5	NC	1	Acft Structural Rep	68G20	SGT	NC	2

TOE DESIGNATION 55-167H7 (page 2)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
09	09	Aircraft Electrician	68F10	E4		1	Aircraft Electrician	68F10	SP4		1
	10	Acft Powerplant Rep	68B10	E4		1	Acft Powerplant Rep	68B10	SP4		2
	11	Acft Powertrain Rep	68D10	E4		2	Acft Powertrain Rep	68D10	SP4		4
	12	Acft Structural Rep	68G10	E4		1	Acft Structural Rep	68G10	SP4		2
	13	Aircraft Electrician	68G10	E3		2	Acft Electrician	68F10	PFC		3
	14	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics	68H10	PFC		2
	15	Acft Powerplant Rep	68B10	E3		2	Acft Powerplant Rep	68B10	PFC		2
	16	Acft Powertrain Rep	68D10	E3		4	Acft Powertrain Rep	68D10	PFC		4
	17	Acft Structural Rep	68G10	E3		2	Acft Structural Rep	68G10	PFC		2
	18	added					Acft Electrical Rep Supv	68F30	SSG		1
	19	added					Acft Pneudraulics Rep Supv	68H30	SSG		1
10	02	Maint Supv	67U30	E6	NC	1	deleted				
	03	Acft Powerplant Supv	68B30	E6	NC	1	deleted				
	04	Aircraft Electrician	68F20	E5	NC	1	transfered to para 09				
	05	Acft Pneudraulics Rep	68H20	E5	NC	1	transfered to para 09				
	06	Acft Poworplant Rep	68B20	E5	NC	1	transfered to para 09				
	07	Acft Powertrain Rep	68D20	E5	NC	1	transfered to para 09				
	08	Acft Structural Rep	68G20	E5	NC	1	transfered to para 09				
	09	Medium Hel Rep	67U20	E5	NC	5	transfered to para 08				
	10	Aircraft Electrician	68F10	E4		1	transfered to para 09				
	11	Acft Pneudraulics Rep	68H10	E4		1	transfered to para 09				
	12	Acft Powertrain Rep	68D10	E4		1	transfered to para 09				
	13	Medium Hel Rep	67U10	E4		8	transfered to para 08				
	14	Acft Powerplant Rep	68B10	E3		1	transfered to para 09				
	15	Acft Powertrain Rep	68D10	E3		2	transfered to para 09				
	16	Acft Structural Rep	68G10	E3		1	transfered to para 09				
	17	Medium Hel Repairer	67U10	E3		14	transfered to para 08				

TOE DESIGNATION TOE 55-424HO Transportation (includes change 15)

Aircraft Maintenance Co., Combat Avn Bn, Armored and Mechanized Div (55-424H000)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01	02	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
02	02	Production Control Sgt	67Z40	E7	NC	1	Production Control Sgt	67Z50	MSG	NC	1
	03	Acft Quality Con Supv	67W4F	E7	NC	1	Acft Quality Control Supv	67Z40	SFC	NC	1
	04	Utility Hel Crew Ch	67N2F	E5	NC	2	transfered to para 04				
	05	Utility Hel Repairer	67N10	E4		1	transfered to para 04				
	08	Hel Msl Sys Rep Insp	68J30	E6	NC	2	deleted				
	09	Acft Struc Rep Insp	68G30	E6	NC	1	deleted				
	10	Attack Hel Tech Insp	67Y3F	E6	NC	1	Attack Hel Tech Insp	66Y3F	SSG	NC	1
	10A	added					Attack Hel Tech Insp	66Y2F	SGT	NC	1
	12	Obsn Hel Tech Insp	67V3F	E6	NC	1	Obsn/Sct Hel Tech Insp	66V3F	SSG	NC	1
	12A	added					Obsn/Sct Hel Tech Insp	66V2F	SGT	NC	1
	13	Util Hel Tech Insp	67N3F	E6	NC	1	Util Hel Tech Insp	66N3F	SSG	NC	1
03	03	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	PLTSGT	NC	1
04	01	Section Chief	67N30	E6	NC	1	Section Chief	67N3F	SSG	NC	1
	03	Obsn/Sct Hel Rep	67V20	E5	NC	6	transfered to line 06				
	04	Utility Hel Repairer	67N20	E5	NC	5	Utility Hel Repairer	67N20	SGT	NC	5
	04A	added					Utility Hel Repairer	67N10	SP4		3
	04B	added					Utility Hel Repairer	67N10	PFC		6
	04C	added					Utility Air Crew Member	67N1F	SP4		2
	05	Section Chief	67Y30	E6	NC	1	Section Chief	67Y3F	SSG	NC	1
	06	Obsn/Sct Hel Repairer	67V10	E4		6	Obsn/Sct Hel Repairer	67V20	SGT	NC	4
	06A	added					Obsn/Sct Hel Repairer	67V10	SP4		6
	06B	added					Obsn/Sct Hel Repairer	67V10	PFC		5
	07	Utility Hel Repairer	67N10	E4		4	transfered to line 04				
	09	Obsn/Sct Hel Repairer	67V10	E3		3	transfered to line 06				
	10	Attack Hel Repairer	67Y10	E4		4	Attack Hel Repairer	67Y10	SP4		5
	11	Utility Hel Repairer	67N10	E3		4	transfered to line 04				
	12	Attack Hel Repairer	67Y10	E3		4	Attack Hel Repairer	67Y10	PFC		5
	13	Attack Hel Repairer	67Y20	E5	NC	5	Attack Hel Repairer	67Y20	SGT	NC	3
	14	added					Section Chief	67V3F	SSG	NC	1

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		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
05	03	Platoon Sergeant	68K40	E7	NC	1	Platoon Sergeant	68K40	PLTSGT	NC	1
	04	Acft Stru Rep Supv	68G30	E6	NC	1	Acft Comp Rep Supv	68K30	SSG	NC	2
	05	Acft Powerplant Supv	68B30	E6	NC	1	deleted				
	12	Acft Powertrain Supv	68D30	E6	NC	1	deleted				
	13	Acft Powerplant Rep	68B10	E4		1	Acft Powerplant Rep	68B10	SP4		2
	14	Acft Structural Rep	68G20	E5	NC	3	Acft Structural Rep	68G20	SGT	NC	3
	16	Aircraft Electrician	68F10	E4		1	Aircraft Electrician	68F10	PFC		1
	18	Acft Powertrain Rep	68D10	E3		3	Acft Powertrain Rep	68D10	PFC		3
	19	Acft Structural Rep	68G10	E4		4	Acft Structural Rep	68G10	SP4		4
	20	Acft Powerplant Rep	68B10	E3		3	Acft Powerplant Rep	68B10	PFC		2
	21	Acft Structural Rep	68G10	E3		5	Acft Structural Rep	68G10	PFC		5
	24	Acft Powerplant Pep	68B20	E5	NC	2	Acft Powerplant Rep	68B20	SGT	NC	2
	25	Acft Pneudraulics Rep	68H1J	E3		1	Acft Pneudraulics Rep	68H10	PFC		1
	26	Acft Instrument Rep	68F20	E5	NC	1	Aircraft Electrician	68F20	SGT	NC	1
	27	Acft Powertrain Rep	68D20	E5	NC	1	Acft Powertrain Rep	68D20	SGT	NC	1
	28	Acft Pneudraulics Rep	68H10	E4		1	Acft Pneudraulios Rep	68H20	SGT	NC	1
	29	Acft Powertrain Rep	68D10	E4		2	Acft Powertrain Rep	68D10	SP4		2
07	03	Platoon Sergeant	68K40	E7	NC	1	Platoon Sergeant	68J40	PLTSGT	NC	1
08	01	Section Chief	68J30	E6	NC	4	Acft Armament Rep Supv	68J30	SSG	NC	1
	02	Hel Missile Sys Rep	68J20	E5	NC	7	Acft Fire Ctl Sys Rep	68J20	SGT	NC	6
	03	Hel Missile Sys Rep	68J10	E4		16	Acft Fire Ctl Sys Rep	68J10	SP4		7
	04	Hel Missile Sys Rep	68J10	E3		11	Acft Fire Ctl Sys Rep	68J10	PFC		9
09	01	Section Chief	68M30	E6	NC	1	Acft Armament Rep Supv	68J30	SSG	NC	1
	02	Hel Weapons System Rep	68M20	E5	NC	1	Acft Wpns Sys Rep	68M20	SGT	NC	5
	03	Hel Weapons System Rep	68M10	E4		2	Acft Wpns Sys Rep	68M10	SP4		6
	04	Hel Weapons System Rep	68M10	E3		3	Acft Wpns Sys Rep	68M10	PFC		7

TOE DESIGNATION TOE 55-459H, Transportation Aircraft Maintenance Intermediate

Support Company (Non Divisional)(Includes change 5) (55-459H500)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01	04	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
02	02	Production Control Sgt	67Z40	E7	NC	1	Production Control Sgt	67Z50	MSG	NC	1
03	02	Chief Acft AC Supv	67W4F	E7	NC	1	Quality Control Supv	67Z40	SFC	NC	1
	03	Hel Msl Sys Rep Insp	68J30	E6	NC	2	deleted				
	05	Acft Pwr Plt Tech Insp	68B3F	E6	NC	1	deleted				
	06	Acft Str Rep Tech Insp	68G3F	E6	NC	1	deleted				
	08	Acft Quality Cont Supv	67W3F	E6	NC	9	Utility Hel Tech Insp	66N3F	SSG	NC	1
	08A	added					Utility Hel Tech Insp	66N2F	SGT	NC	2
	08B	added					Medium Lift Hel Tech Insp	66U3F	SSG	NC	1
	08C	added					Obsn/Sct Hel Tech Insp	66V3F	SSG	NC	1
	08D	added					Obsn/Sct Hel Tech Insp	66V2F	SGT	NC	1
	08E	added					Attack Hel Tech Insp	66Y3F	SSG	NC	1
	08F	added					Attack Hel Tech Insp	66Y2F	SGT	NC	1
04	03	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	PLTSGT	NC	1
	05	Toolroom Keeper	67N10	E3		1	Utility Hel Repairer	67N10	SP4		1
05	01	Acft Maint Sergeant	67Z40	E7	NC	3	Acft Maint Supv	67Z4F	SFC	NC	2
	02	Maintenance Supv	67N30	E6	NC	3	Maintenance Sergeant	67N3F	SSG	NC	2
	02A	added					Maintenance Sergeant	67Y3F	SSG	NC	1
	02B	added					Maintenance Sergeant	67U3F	SSG	NC	1
	03	Attack Hel Repairer	67Y20	E5	NC	4	Attack Hel Repairer	67Y20	SGT	NC	2
	04	Medium Hel Repairer	67U20	E5	NC	3	Medium Hel Repairer	67U20	SGT	NC	3
	05	Obsn/Scout Hel Repairer	67V20	E5	NC	2	Obsn/Sct Hel Repairer	67V20	SGT	NC	2
	06	Utility Hel Repairer	67N20	E5	NC	9	Utility Hel Repairer	67N20	SGT	NC	8
	07	Attack Hel Repairer	67Y10	E4		2	Attack Hel Repairer	67Y10	SP4		3
	08	Medium Hel Repairer	67U10	E4		4	Medium Hel Repairer	67U10	SP4		4
	09	Obsn/Scout Hel Repairer	67V10	E4		3	Obsn/Scout Hel Repairer	67V10	SP4		2
	10	Utility Hel Repairer	67N10	E4		6	Utility Hel Repairer	67N10	SP4		6
	11	Medium Hel Repairer	67U10	E3		8	Medium Hel Repairer	67U10	PFC		8
	12	Utility Hel Repairer	67N10	E3		9	Utility Hel Repairer	67N10	PFC		12

TOE DESIGNATION 55-459 (page 2)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
05	13	Obsn/Scout Hel Repairer	67V10	E3		1	Obsn/Scout Hel Repairer	67V10	PFC		2
	14	Attack Hel Repairer	67Y10	E3		3	Attack Hel Repairer	67Y10	PFC		4
	15	added					Utility Hel Aircrew Mem	67N1F	SP4		2
06	05	Aircraft Maint Sgt	67Z40	E7	NC	1	deleted				
	06	Maintenance Supervisor	67N3F	E6	NC	1	deleted				
	07	Maintenance Supervisor	67U3F	E6	NC	1	deleted				
	10	Utility Hel Repairer	67N20	E5	NC	1	transfered to para 05				
	11	UH-1 Crew Chief	67N2F	E5	NC	2	transfered to para 05				
	15	Utility Hel Repairer	67N10	E4		1	transfered to para 05				
07	03	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	68K40	PLTSGT	NC	1
	05	Toolroom Keeper	68G10	E3		1	Toolroom Keeper	68G10	SP4		1
							Airframe/Electrical Sec				
08	01	Acft Maint Sergeant	67Z40	E7	NC	1	Acft Components Rep Supv	68K40	SFC	NC	1
	01A	added					Acft Components Rep Sgt	68K30	SSG	NC	3
	02	Acft Instrument Rep	68F10	E4		2	Aircraft Electrician	68F20	SGT	NC	2
	02A	added					Acft Electrical Rep Sgt	68F30	SSG	NC	1
	03	Aircraft Electrician	68F10	E4		2	Aircraft Electrician	68F10	SP4		1
	04	Acft Powertrain Rep	68D20	E5	NC	1	transfered to para 10				
	05	Acft Structural Rep	68G20	E5	NC	2	Acft Structural Repairer	68G20	SGT	NC	9
	06	Aircraft Electrician	68F10	E4		2	Acft Electrician	68F10	PFC		3
	07	Acft Powertrain Rep	68D10	E4		2	transfered to para 10				
	08	Acft Structural Rep	68G10	E4		2	Acft Structural Repairer	68G10	SP4		10
	09	Acft Powertrain Rep	68D10	E3		2	transfered to para 10				
	10	Acft Structural Rep	68G10	E3		3	Acft Structural Repairer	68G10	PFC		13
09	01	Acft Comp Rep Supv	68K40	E7	NC	1	deleted				
	02	Acft Structural Rep	68G20	E5	NC	8	transfered to para 08				
	04	Acft Structural Rep	68G10	E4		7	transfered to para 08				
	05	Acft Structural Rep	68G10	E3		10	transfered to para 08				

TOE DESIGNATION 55-459H (page 3)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
10	01	Acft Comp Rep Supv	68K40	E7	NC	1	Engine/Pneu/Pwrtrain Supv	68K40	SFC	NC	1
	01A	added					Acft Comp Rep Supv	68K30	SSG	NC	2
	02	Acft Pneudraulics Rep	68H20	E5	NC	2	Acft Pneudraulic Rep Supv	68H30	SSG	NC	1
	03	Acft Powerplant Rep	68B20	E5	NC	9	Acft Powerplant Rep	68B20	SGT	NC	10
	05	Acft Pneudraulics Rep	68H10	E4		1	Acft Pneudraulics Rep	68H20	SGT	NC	2
	06	Acft Powerplant Rep	68B10	E4		7	Acft Powerplant Rep	68B10	SP4		7
	07	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	PFC		2
	08	Acft Powerplant Rep	68B10	E3		12	Acft Powerplant Rep	68B10	PFC		11
	09	added					Acft Powertrain Rep	68D20	SGT	NC	1
	10	added					Acft Powertrain Rep	68D10	SP4		2
	11	added					Acft Powertrain Rep	68D10	PFC		2
11	02	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	68J40	PLTSGT	NC	1
13	02	Hel Msl Sys Rep Supv	68J30	E6	NC	2	Acft Armament Rep Supv	68J30	SSG	NC	1
	04	Hel Msl Sys Rep	68J20	E5	NC	3	Acft Fire Control Sys Rep	68J20	SGT	NC	3
	04A	added	68J20	E5	NC	3	Acft Weapons Sys Rep	68M20	SGT	NC	2
	05	Hel Msl Sys Rep	68J10	E4		7	Acft Fire Control Sys Rep	68J10	SP4		3
	05A	added					Acft Weapons Sys Rep	68M10	SP4		3
	06	Hel Msl Systems Rep	68J10	E3		8	Acft Fire Control Sys Rep	68J10	PFC		4
	06A	added					Acft Weapons Sys Rep	68M10	PFC		3

TOE DESIGNATION 55-459H Augmentation SRC 55459H502

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01	01	Section Sergeant	67G30	E6	NC	1	Section Sergeant	67G3F	SSG	NC	1
	02	Airplant Tech Insp	67W30	E6	NC	1	Util/Cargo Airplane Tech Insp	66G3F	SSG	NC	1
	03	Acft Powerplant Rep	68B10	E4		1	Acft Powerplant Rep	68B10	SP4		1
	04	Acft Structural Rep	68G20	E5	NC	1	Acft Structural Rep	68G20	SGT	NC	1
	05	Airplane Repairer	67G10	E5		3	Util/Cargo Airplane Rep	67G20	SGT	NC	2
	07	Acft Powerplant Rep	68B10	E3		1	Acft Powerplant Rep	68B10	PFC		1
	08	Acft Structural Rep	68G10	E4		1	Acft Structural Rep	68G10	SP4		2
	09	Acft Structural Rep	68G10	E3		2	Acft Structural Rep	68G10	PFC		1
	10	Airplane Repairer	67G10	E4		3	Util/Cargo Airplane Rep	67G10	SP4		3
	12	Airplane Repairer	67G10	E3		3	Util/Cargo Airplane Rep	67G10	PFC		4

TOE DESIGNATION 57-057H, Combat Support Aviation Company, Combat Aviation Battalion,

Airborne Infantry, Infantry (Mechanized) or Armored Division (Includes change 9) (57-057H320)

CURRENT POSITION DATA							SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
01		Company Headquarters									
	04	First Sergeant	67Z5M	E8	NC	1	First Sergeant	67Z5M	1SG	NC	1
02		2 Airlift Platoon Hq					2 Airlift Platoons				
	04	Platoon Sergeant	67Z40	E7	NC	2	Platoon Sergeant	67Z4F	PLTSGT	NC	2
	05	Utility Hel Crew Chief	67N2F	E5	NC	2	Utility Hel Air Crew Mem	67N1F	SP4		2
03		4 Airlift Sections									
	04	Utility Hel Crew Chief	67N2F	E5	NC	20	Utility Hel Air Crew Mem	67N2F	SGT	NC	4
	04A	added					Utility Hel Air Crew Mem	67N1F	SP4		8
	04B	added					Utility Hel Air Crew Mem	67N1F	PFC		8
06		AVUM Platoon Hq									
	02	Platoon Sergeant	67Z40	E7	NC	1	Platoon Sergeant	67Z4F	PLTSGT	NC	1
	08	Utility Hel Crew Chief	67N2F	E5	NC	1	Utility Hel Air Crew Mem	67N1F	SP4		1
	09	Hel Weapon Sys Repair	68M10	E4		1	transfered to para 10				
	18	Utility Hel Tech Insp	67N3F	E6	NC	4	Utility Hel Tech Insp	66N3F	SSG	NC	2
	18A	added					Utility Hel Tech Insp	66N2F	SGT	NC	3
07		Acft Maint Section									
	02	Maintenance Supv	67Z40	E7	NC	1	Maintenance Supv	67N3F	SSG	NC	1
	02A	added					Maintenance Sergeant	67N3F	SSG	NC	1
	04	Utility Hel Repairer	67N20	E5	NC	4	Utility Hel Repairer	67N20	SGT	NC	6
	06	Utility Hel Repairer	67N10	E4		4	Utility Hel Repairer	67N10	SP4		6
	07	Utility Hel Repairer	67N10	E3		5	Utility Hel Repairer	67N10	PFC		8
09		Airfield Services Sec									
	01	Airfield Service Supv	67N20	E5	NC	1	Acft Fuel Handler Supv	76W20	SGT	NC	1
10		Acft Comp Rep Section									
	02	Acft Comp Rep Supv	68K40	E7	NC	1	Acft Comp Rep Supv	68K30	SSG	NC	1
	04	Acft Powerplant Rep	68B10	E4		1	Acft Powerplant Rep	68B10	SP4		1

TOE DESIGNATION 57-057H (page 2)

		CURRENT POSITION DATA					SUGGESTED CHANGES				
Para	Line	Duty Position Title	MOS Code	Grade	Br	No	Duty Position Title	MOS Code	Grade	Br	No
10	07	Utility Hel Repairer	67N20	E5	NC	2	transfered to para 07				
	08	Acft Powertrain Repairer	68D10	E3		1	Acft Powertrain Rep	68D10	PFC		1
	09	Acft Structural Repairer	68G10	E4		1	Acft Structural Repairer	68G10	SP4		1
	10	Acft Powerplant Repairer	68B10	E3		1	Acft Powerplant Repairer	68B10	PFC		1
	12	Acft Powertrain Repairer	68D10	E4		1	Acft Powertrain Repairer	68D20	SGT	NC	1
	13	Utility Hel Repairer	67N10	E4		2	transfered to para 07				
	15	Utility Hel Repairer	67N10	E3		3	transfered to para 07				
	16	Acft Pneudraulics Rep	68H10	E3		1	Acft Pneudraulics Rep	68H10	SP4		1
	17	Acft Electrician	68F10	E3		1	Acft Electrician	68F10	SP4		1
	19	Acft Quality Control Supv	67W3F	E6	NC	1	transfered to para 06				
	22	Acft Structural Repair	68G10	E3		1	Acft Structural Repairer	68G10	PFC		1
	23	added					Acft Weapons Sys Rep	68M10	SP4		1

APPENDIX D

MOS SPECIFICATIONS/STANDARDS OF GRADE

CMF 67

UTILITY/CARGO AIRPLANE REPAIRER

(Util/Cargo Apln Rep)

MOS 67G

Summary

Supervises and performs maintenance on utility/cargo airplanes, excluding repair of systems components.

Duties

MOSC 67G10: Performs aviation unit, intermediate, and depot maintenance on utility/cargo airplanes. Performs air crewmember duties. REMOVES/REPLACES/INSTALLS SUBSYSTEMS. Removes and installs subsystem assemblies such as engines, propellers, and main wheels. Removes and replaces subsystem components such as starters, generators, inverters, voltage regulators, lights, batteries, pumps, reservoirs, valves, hydraulic cylinders, carburetors, flight controls, and flight control hydraulic components. CLEANS/SERVICES/LUBRICATES. Performs required cleaning, lubricating, and servicing on airplanes. CHECKS/INSPECTIONS. Prepares airplanes for extensive inspections and maintenance checks by removing such items as cowling, inspection plates, panels, floorboards, doors, and auxiliary equipment. Performs maintenance operational checks and taxis airplanes. DIAGNOSIS/TROUBLESHOOTS. Performs diagnostic and troubleshooting duties on subsystems using special tools and equipment. AIRPLANE SHIPMENT/STORAGE/REMOVAL PREPARATIONS. Prepares airplanes for entry into and removal from storage, for shipment by surface and air, and places them back in flyable status. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for aircraft maintenance and ground handling. Uses and performs user maintenance on common and special tools. FORMS/RECORDS. Prepares maintenance forms and records related to MOS.

MOSC 67G20: Performs aviation unit, intermediate, and depot maintenance on utility/cargo airplanes. Performs duties of preceding skill level and provides technical guidance to lower grade personnel.

MOSC 67G30: Supervises aviation unit, intermediate, and depot maintenance on utility/cargo airplanes. MAINTENANCE MANAGEMENT. Plans work flow in terms of resources and facilities. Applies production control, quality control, and other maintenance management principles to shop and fight line operations. Supervises and evaluates work performance in airplane maintenance and flight line facilities for compliance with directives, technical manuals, work standards, and operational policies. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients and instructs personnel and conducts on-the-job training programs in airplane maintenance, supply, and safety techniques. Advises aircraft repairers on maintenance practices, procedures, and techniques. FORMS AND RECORDS. Prepares forms, records, and reports on aircraft maintenance supply operations.

MOSC 67G40: Supervises aviation unit, intermediate, and depot maintenance on utility/cargo and observation airplanes. DETERMINES MAINTENANCE FACILITIES REQUIREMENTS. Plans and lays out airplane maintenance areas, component repair shops, and facilities. DETERMINES REQUIREMENTS AND SUPERVISES MAINTENANCE ACTIVITIES. Determines manhours and parts requirements to repair airplanes and associated equipment. Coordinates work, assigns duties, and instructs subordinates in maintenance work techniques and procedures. Supervises and applies production control, quality control, and other maintenance management principles and procedures. Advises personnel in diagnosing complex malfunctions. Ensures that shop safety principles and procedures are observed. Maintains supply economy and discipline. Prepares evaluations, special reports, and records pertaining to airplane maintenance and related activities. Supervises on-the-job training program. Supervises preparation of work orders, requisitions, recurring reports, and correspondence. PLANS AND POLICIES. Assists in preparation of plans and policies.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67G10	MOSC 67G20	MOSC 67G30	MOSC 67G40
a. Physical:				
(1) Profile: 222211 (E1-E6)	x			
(2) Profile: 32322 (E7)				
(3) Normal color vision	x			
b. Aptitude area: MM	x			
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x			

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Utility/Cargo Airplane Repairer	67G10	PFC		1	1	2	2	2	3	3	4	4	Grades of additional positions will be authorized in same pattern.
2	Utility/Cargo Airplane Repairer	67G10	SP4	1	1	1	1	1	2	2	3	3	3	
3	Utility/Cargo Airplane Repairer	67G20	SGT			1	1	2	2	2	2	2	3	Grades of air crewmembers will be determined in same manner.
4	Maintenance Supervisor/Section Chief	67G30	SSG											For supervision of personnel engaged in utility/cargo airplane maintenance as follows: E6 7-16 — 1 17-34 — 2 35 or more — 3
5	Maintenance Supervisor/Platoon Sergeant	67G40	SFC											For supervision of personnel engaged in utility/cargo and observation airplane maintenance as follows: E7 9-23 — 1 24-45 — 2 46 or more — 3

CMF 67
UTILITY/CARGO AIRPLANE TECHNICAL INSPECTOR
(Util/Cargo Apln TI)
MOS 66G
Summary

Performs technical inspections and monitors the quality control program on utility/carg· airplanes to determine maintenance requirements and to ensure that appropriate maintenance has been performed.

MOSC 66G20: Performs technical inspections and monitors the quality control program on utility/cargo airplanes. CHECKS/CONSULTS RECORDS AND CREWS. Checks airplane flight and maintenance records to determine adherence to prescribed maintenance standards. Consults flight crews on unusual operations of airplanes. AIRPLANE INSPECTIONS. Conducts thorough inspections of airplanes using technical publications and checklists, both initial and final. Performs operational checks and troubleshoots airplane systems to detect present and incipient malfunctions. Participates in maintenance test flights. Annotates records of maintenance required to be performed. Evaluates operational readiness of airplanes and recommends corrective action. Inspects crash damaged airplanes and estimates manhours, parts, and costs to repair. Performs complete technical inspections of installed assemblies and systems on airplanes to ensure that repairs comply with prescribed standards. TECHNICAL GUIDANCE/TRAINING. Provides technical guidance/training to repairers in proper maintenance, corrosion prevention and treatment techniques, and safety procedures. Maintains technical library.

MOSC 66G30: Performs technical inspections and monitors quality control programs on utility/cargo airplanes. Performs duties of preceding skill level and provides technical guidance to subordinate personnel. Computes aircraft weight and balance. SUPERVISES/DIRECTS. Plans, directs, and supervises technical inspection activities. Ensures compliance in aircraft configuration control and spectrometric analysis program, and in test measuring/diagnostic equipment calibration and recertification schedules. Monitors on-the-job training program for aircraft repairers. SHOP ADMINISTRATION. Prepares evaluation reports on subordinate personnel. Performs maintenance trend analysis. Checks maintenance/supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS).

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 66G20	MOSC 66G30
a. Physical:		
(1) Profile: 222211	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other:		
(1) No record of conviction of any Federal or State statute relating to the growing, processing. manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	
(2) Must have 18 months experience in MOS 67G at Skill Level 2 and have completed the TI course for award of this MOS.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Utility/Cargo Airplane Technical Inspector	66G20	SGT	As a full-time positions for initial and final technical inspection of utility/cargo airplanes as follows:
2	Utility/Cargo Airplane Technical Inspector	66G30	SSG	

TI Auth	E5	E6
1	-	1
2	1	1
3	2	1
4	2	2
5	3	2

CMF 67
OBSERVATION AIRPLANE REPAIRER
(Obsn Airplane Rep)
MOS 67H
Summary

Supervises and performs maintenance on observation and target aircraft, excluding repair of systems components.

Duties

MOSC 67H10: Performs aviation unit, intermediate, and depot maintenance on observation and target aircraft. REMOVES/REPLACES/INSTALLS/SUBSYSTEMS. Removes and installs subsystem assemblies such as engines, propellers, and main wheels. Removes and replaces subsystems components such as starters, generators, inverters, voltage regulators, lights, batteries, pumps, reservoirs, valves, hydraulic cylinders, carburetors, flight controls, and flight control hydraulic components. CLEANS/SERVICES/LUBRICATES. Performs required cleaning, lubricating, and servicing. CHECKS/INSPECTIONS. Prepares airplanes for extensive inspections and maintenance checks by removing such items as cowling, inspection plates, panels, floorboards, doors, and auxiliary equipment. Performs maintenance operational checks and taxis airplanes. DIAGNOSIS/TROUBLESHOOTS. Performs diagnostic and troubleshooting duties on subsystems using special tools and equipment. AIRPLANE SHIPMENT/STORAGE/REMOVAL PREPARATIONS. Prepares airplanes for entry into and removal from storage. Prepares airplanes for shipment by surface and air and places them back in flyable status. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for aircraft maintenance and ground handling. Uses and performs user maintenance on common and special tools. FORMS/RECORDS. Prepares maintenance forms and records related to MOS.

MOSC 67H20: Performs aviation unit, intermediate, and depot maintenance on observation and target aircraft. Performs duties of preceding skill level and provides technical guidance to lower grade personnel.

MOSC 67H30: Supervises aviation unit, intermediate, and depot maintenance on observation and target aircraft. MAINTENANCE MANAGEMENT. Plans work flow in terms of resources and facilities. Applies production control, quality control, and other maintenance management principles to shop and flight line operations. Supervises and evaluates work performance in airplane maintenance and flight line facilities for compliance with directives, technical manuals, work standards, and operational policies. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients and instructs personnel and conducts on-the-job training programs in airplane maintenance, supply, and safety techniques. Advises aircraft repairers on maintenance practices, procedures, and techniques. FORMS AND RECORDS. Prepares forms, records, and reports on aircraft maintenance and supply operations.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67H10	MOSC 67H20	MOSC 67H30
a. Physical:			
(1) Profile: 323222	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety
B7	Ejection Seat Repairer

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Observation Airplane Repairer	67H10	PFC		1	1	2	2	2	3	3	4	4	Grades of additional positions will be authorized in same pattern.
2	Observation Airplane Repairer	67H10	SP4	1	1	1	1	1	2	2	3	3	4	
3	Observation Airplane Repairer	67H20	SGT			1	1	2	2	2	2	2	2	
4	Maintenance Supervisor/Section Chief	67H30	SSG											For supervision of personnel engaged in observation airplane maintenance as follows:

	E6
15-30	1
31-45	2
46 or more	3

CMF 67
OBSERVATION AIRPLANE TECHNICAL INSPECTOR
(Obsn Airplane TI)
MOS 66H
Summary

Performs technical inspections and monitors the quality control program on observation and target aircraft to determine maintenance requirements and to ensure that maintenance has been performed.

MOSC 66H20: Performs technical inspections and monitors the quality control program on observation and target aircraft. CHECKS/CONSULTS RECORDS AND CREWS. Checks airplane flight and maintenance records to determine adherence to prescribed maintenance standards. Consults flight crews on unusual operations of airplanes. AIRPLANE INSPECTIONS. Conducts thorough inspections of airplanes using technical publications and checklists, both initial and final. Performs operational checks and troubleshoots airplane systems to detect present and incipient malfunctions. Participates in maintenance test flights. Annotates records on maintenance required to be performed. Evaluates operational readiness of airplanes and recommends corrective action. Inspects crash damaged airplanes and estimates manhours, parts, and costs to repair. Performs complete technical inspections of installed assemblies and systems on airplanes to ensure that repairs comply with prescribed standards. TECHNICAL GUIDANCE/TRAINING. Provides technical guidance/training to repairers in proper maintenance, corrosion prevention and treatment techniques, and safety procedures. Maintains technical library.

MOSC 66H30: Performs technical inspections and monitors the quality control programs on observation and target aircraft. Performs duties of preceding skill level and provides technical guidance to subordinate personnel. Computes aircraft weight and balance. SUPERVISES/DIRECTS. Plans, directs, and supervises technical inspection activities. Ensures compliance in aircraft configuration control and spectrometric analysis program, and in test measuring/diagnostic equipment calibration and recertification schedules. Supervises on-the-job training programs for aircraft repairers. SHOP ADMINISTRATION. Prepares evaluation reports on subordinate personnel. Performs maintenance trend analysis. Checks maintenance/supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS).

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 66H20	MOSC 66H30
a. Physical:		
(1) Profile: 222211	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other:		
(1) No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	
(2) Must have 18 months experience in MOS 67H Skill Level 2 and have completed the TI course for award of this MOS.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety
B7	Ejection Seat Repairer

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Observation Airplane Technical Inspector	66H20	SGT	As a full-time positions for initial and final technical inspection of observation airplanes as follows:
2	Observation Airplane Technical Inspector	66H30	SSG	

No. TIs Auth	E5	E6
1	-	1
2	1	1
3	2	1
4	2	2
5	3	2

UTILITY HELICOPTER REPAIRER
(Util Hel Rep)
MOS 67N
Summary

Supervises and performs maintenance on utility helicopters, excluding repair of systems components.

Duties

MOSC 67N10: Performs aviation unit, intermediate, and depot maintenance on utility helicopters. Performs air crewmember duties. REMOVES/REPLACES/INSTALLS/SUBSYSTEMS. Removes and installs subsystem assemblies such as engines, transmissions, gear boxes, flight controls, flight control hydraulic components, rotor hubs, and rotor blades. Removes and replaces subsystems components such as starters, generators, inverters, voltage regulators, lights, batteries, pumps, reservoirs, valves, hydraulic cylinders, and hoses. CLEANS/SERVICES/HELICOPTERS. Services and lubricates helicopters and subsystems. Prepares helicopters for extensive inspection and maintenance by removing and replacing items such as cowling, inspection plates, panels, floor boards, doors, and auxiliary equipment. Performs maintenance operational checks and scheduled and special helicopter inspections. DIAGNOSIS/TROUBLESHOOTS. Performs diagnostic and troubleshooting duties on helicopter subsystems using special tools and diagnostic equipment as required. Troubleshoots rotor system malfunctions. HELICOPTER STORAGE/SHIPMENT/REMOVAL PREPARATIONS. Prepares helicopters for entry into and removal from storage, for shipment by surface or air, and returns them to flyable condition. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for helicopter maintenance and ground handling. Uses and performs user maintenance on common and special tools. FORMS RECORDS MAINTENANCE. Prepares maintenance forms and records related to MOS.

MOSC 67N20: Performs aviation unit, intermediate, and depot maintenance on utility helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

MOSC 67N30: Supervises aviation unit, intermediate, and depot maintenance on utility helicopters. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow in terms of resources and facilities. Applies production control, quality control, and other maintenance management principles to shop, flight line, and supply operations. Supervises and evaluates work performance in utility helicopter maintenance and flight line facilities in terms of compliance with directives, technical manuals, work standards, and operational policies. Monitors maintenance operational checks and test flights. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients and instructs personnel and conducts on-the-job training programs in helicopter maintenance, supply, and safety techniques.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67N10	MOSC 67N20	MOSC 67N30
a. Physical:			
(1) Profile: 222211	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Utility Helicopter Repairer	67N10	PFC		1	1	2	2	2	3	4	4	4	Grades of additional positions will be authorized in same pattern.
2	Utility Helicopter Repairer	67N10	SP4	1	1	1	1	2	2	2	2	2	3	
3	Utility Helicopter Repairer	67N20	SGT			1	1	1	2	2	2	3	3	Grades of air crew-members will be determined in same manner.
4	Utility Helicopter Maintenance Supervisor	67N30	SSG											For supervision of personnel engaged in utility helicopter maintenance as follows:

	E6
7-25	1
6-50	2
51-75	3

CMF 67
UTILITY HELICOPTER TECHNICAL INSPECTOR
(Util Hel TI)
MOS 66N
Summary

Performs technical inspections and monitors the quality control program on utility helicopters to determine maintenance requirements and to ensure that maintenance has been performed.

Duties

MOSC 66N20: Performs technical inspections and monitors the quality control program on utility helicopters. CHECKS/CONSULTS RECORDS AND CREWS. Checks aircraft flight and maintenance records to determine adherence to prescribed maintenance standards. Consults flight crews on unusual operations of helicopters. INSPECTIONS. Conducts thorough inspections, both initial and final, on utility helicopters, using technical publications and checklists. Performs operational checks and troubleshoots helicopter systems to detect present and incipient malfunctions. Evaluates operational readiness of helicopters and recommends corrective action. Inspects crash damaged helicopters and estimates manhours, parts, and costs to repair. Performs complete technical inspections of installed assemblies and systems on helicopters to ensure that repairs comply with prescribed standards. TECHNICAL GUIDANCE/TRAINING. Provides technical guidance to repairers on proper maintenance, corrosion prevention and treatment techniques, and safety procedures. Maintains technical library.

MOSC 66N30: Performs technical inspections and monitors the quality control program on utility helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel. Computes helicopter weight and balance. SUPERVISES/DIRECTS INSPECTIONS. Plans, directs, and supervises technical inspection activities. Ensures compliance in aircraft configuration control and spectrometric analysis program, test measuring/diagnostic equipment calibration, and recertification schedules. Supervises on-the-job training programs. MAINTENANCE ADMINISTRATION. Prepares evaluation reports on subordinate personnel. Performs maintenance trend analysis. Checks maintenance/supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS).

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 66N20	MOSC 66N30
a. Physical:		
(1) Profile: 222211	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other:		
(1) No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	
(2) Must have 18 months experience in MOS 67N Skill Level 2 and have completed the TI course for award of this MOS.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes		
1	Utility Helicopter Technical Inspector	66N20	SGT	As a full time positions for initial and final technical inspection of utility/cargo airplanes as follows:		
2	Utility Helicopter Technical Inspector	66N30	SSG	TI Auth	E5	E6
				1	-	1
				2	1	1
				3	2	1
				4	2	2
				5	3	2

CMF 67
TACTICAL TRANSPORT HELICOPTER REPAIRER
(Tac Trans Hel Rep)
MOS 67T
Summary

Supervises and performs maintenance on tactical transport helicopters, excluding repair of systems components.

Duties

MOSC 67T10: Performs aviation unit, intermediate, and depot maintenance on tactical transport helicopter. Performs air crewmember duties. REMOVES/REPLACES/INSTALLS SUBSYSTEMS. Removes and installs subsystem assemblies such as engines, transmission, gearboxes, flight controls, flight control hydraulic components, rotor hubs, and rotor blades. Removes and replaces subsystem components such as starters, generators, inverters, voltage regulators, lights, batteries, pumps, reservoirs, valves, hydraulic cylinders, and hoses. CLEANS/SERVICES HELICOPTERS. Services and lubricates helicopters and subsystems. Prepares helicopters for extensive inspection and maintenance by removing and replacing items such as cowling, inspection plates, panels, floorboards, doors, and auxiliary equipment. Performs maintenance operational checks and scheduled and special helicopter inspections. DIAGNOSIS/TROUBLESHOOTS. Performs diagnostic and troubleshooting duties on helicopter subsystems using special tools and equipment as required. Troubleshoots rotor system malfunctions. HELICOPTER STORAGE/SHIPMENT/REMOVAL PREPARATIONS. Prepares helicopters for entry into and removal from storage, for shipment by surface or air, and returns them to flyable condition. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for helicopter maintenance and ground handling. Uses and performs user maintenance on common and special tools. FORMS/RECORDS MAINTENANCE. Prepares maintenance forms and records related to MOS.

MOSC 67T20: Performs aviation unit, intermediate, and depot maintenance on tactical transport helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

MOSC 67T30: Supervises aviation unit, intermediate, and depot maintenance on tactical transport helicopter. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow in terms of resources and facilities. Applies production control, quality control, and other maintenance management principles to shop, flight line, and supply operations. Supervises and evaluates work performance in tactical transport helicopter maintenance and flight line facilities in terms of compliance with directives, technical manuals, work standards, and operational policies. Monitors maintenance operational checks and test flights. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients and instructs personnel and conducts on-the-job training programs in helicopter maintenance, supply, and safety techniques.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67T10	MOSC 67T20	MOSC 67T30
a. Physical:			
(1) Profile: 222211	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Tactical Transport Helicopter	67T10	PFC		1	1	2	2	2	3	4	4	4	Grades of additional positions will be authorized in same pattern.
2	Tactical Transport Helicopter Repairer	67T10	SP4	1	1	1	1	2	2	2	2	2	3	
3	Tactical Transport Helicopter Repairer	67T20	SGT			1	1	1	2	2	2	3	3	Grades of air crew-members will be determined in same manner.
4	Tactical Transport Helicopter Maintenance Supervisor	67T30	SSG											For supervision of personnel engaged in tactical transport helicopter maintenance as follows:

	E6
7-25	1
26-50	2
51-75	3

CMF 67
TACTICAL TRANSPORT HELICOPTER TECHNICAL INSPECTOR
(Tac Trans Hel TI)
MOS 66T
Summary

Performs technical inspections and monitors the quality control program on tactical transport helicopters to determine maintenance requirements and to ensure that appropriate maintenance has been performed.

Duties

MOSC 66T20: Performs technical inspections and monitors the quality control program on tactical transport helicopter. CHECKS/CONSULTS RECORDS AND CREWS. Checks aircraft flight and maintenance records to determine adherence to prescribed maintenance standards. Consults flight crews on unusual operation of helicopters. INSPECTIONS. Conducts thorough inspections on tactical transport helicopters, both initial and final, using technical publications and checklists. Performs operational checks and troubleshoots helicopter systems to detect present and incipient malfunctions, evaluates operational readiness of helicopter, and recommends corrective actions. Participates in maintenance test flights. Inspects crash damaged helicopters and estimates manhours, parts, and costs to repair. Performs complete technical inspections of installed assemblies and systems on helicopters to ensure that repairs comply with prescribed standards. TECHNICAL GUIDANCE/TRAINING. Provides technical guidance/training to repairers in proper maintenance, corrosion prevention and treatment techniques, and safety procedures. Maintains technical library.

MOSC 66T30: Performs technical inspections and monitors quality control program on tactical transport helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel. Computes helicopter weight and balance. SUPERVISES/DIRECTS INSPECTIONS. Plans, directs, and supervises inspection activities. Ensures compliance in aircraft configuration control and spectrometric analysis program, test measuring, diagnostic equipment calibration, and recertification schedules. Supervises on-the-job training programs. MAINTENANCE ADMINISTRATION. Prepares evaluation reports on subordinate personnel. Performs maintenance trend analysis. Checks maintenance/supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS).

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 66T20	MOSC 66T30
a. Physical:		
(1) Profile: 222211	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other:		
(1) No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	
(2) Must have 18 months experience in MOS 67T at Skill Level 2 and have completed the TI course for award of this MOS.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Tactical Transport Helicopter Technical Inspector	66T20	SGT	As a full-time positions for initial and final technical inspection of tactical transport helicopters as follows:
2	Tactical Transport Helicopter Technical Inspector	66T30	SSG	

TI Auth	E5	E6
1	-	1
2	1	1
3	2	1
4	2	2
5	3	2

CMF 67
MEDIUM HELICOPTER REPAIRER
(Medium Hel Rep)
MOS 67U
Summary

Supervises and performs maintenance on medium helicopters, excluding repair of systems components.

Duties

MOSC 67U10: Performs aviation unit, intermediate, and depot maintenance on medium helicopter. Performs air crewmember duties as required. REMOVES/REPLACES/INSTALLS SUBSYSTEMS. Removes and installs subsystem assemblies such as engines, transmission, gearboxes, flight controls, flight control hydraulic components, rotor hubs, and rotor blades. Removes and replaces subsystem components such as starters, generators, inverters, voltage regulators, lights, batteries, pumps, reservoirs, valves, hydraulic cylinders, and hoses. CLEANS/SERVICES HELICOPTERS. Services and lubricates helicopters and subsystems. Prepares helicopters for extensive inspection and maintenance by removing and replacing items such as cowling, inspection plates, panels, floorboards, doors, and auxiliary equipment. Performs maintenance operational checks and scheduled and special helicopter inspections. DIAGNOSIS/TROUBLESHOOTS. Performs diagnostic and troubleshooting duties on helicopter subsystems using special tools and diagnostic equipment as required. Troubleshoots rotor system malfunctions. HELICOPTER STORAGE/SHIPMENT/REMOVAL PREPARATIONS. Prepares helicopters for entry into and removal from storage, for shipment by surface or air, and returns them to flyable condition. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for helicopter maintenance and ground handling. Uses and performs user maintenance on common and special tools. FORMS/RECORDS MAINTENANCE. Prepares maintenance forms and records related to MOS.

MOSC 67U20: Performs aviation unit, intermediate, and depot maintenance on medium helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

MOSC 67U30: Supervises aviation unit, intermediate, and depot maintenance on medium helicopters. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow in terms of resources and facilities. Applies production control, quality control, and other maintenance management principles to shop, flight line, and supply operations. Supervises and evaluates work performance in medium helicopter maintenance and flight line facilities in terms of compliance with directives, technical manuals, work standards, and operational policies. Monitors maintenance operational checks and test flights. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients and instructs personnel and conducts on-the-job training programs in helicopter maintenance, supply, and safety techniques.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67U10	MOSC 67U20	MOSC 67U30
a. Physical:			
(1) Profile: 222211	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Medium Helicopter Repairer	67U10	PFC		1	2	2	3	3	3	4	5	5	Grades of additional positions will be authorized in same pattern.
2	Medium Helicopter Repairer	67U10	SP4	1	1	1	1	1	2	3	3	3	3	
3	Medium Helicopter Repairer	67U20	SGT				1	1	1	1	1	1	2	
4	Air Crewmember	67U10	SP4		1	2	2	3	3	4	4	5	5	Grades of air crewmembers will be determined in this pattern.
5	Air Crewmember	67U20	SGT	1	1	1	2	2	3	3	4	4	5	
6	Maintenance Supervisor/Section Chief/Assistant Platoon Sergeant	67U30	SSG											In flight platoons and supervision of total numbers of personnel engaged in medium helicopter maintenance as follows:

	E6
8-20	1
21-40	2
41-60	3
61 or more	4

CMF 67
MEDIUM HELICOPTER TECHNICAL INSPECTOR
(Medium Hel TI)
MOS 66U
Summary

Performs technical inspections and monitors the quality control program on medium helicopters to determine maintenance requirements and to ensure that maintenance has been performed.

Duties

MOSC 66U30: Performs technical inspections and monitors the quality control program on medium helicopters. CHECKS/CONSULTS RECORDS AND CREWS. Checks aircraft flight and maintenance records to determine adherence to prescribed maintenance standards. Consults flight crews on unusual operation of helicopters. INSPECTIONS. Conducts thorough inspections on tactical helicopters, both initial and final, on medium helicopters using technical publications and checklists. Performs operational checks and troubleshoots helicopter systems to detect present and incipient malfunctions. Computes helicopter weight and balance. Participates in maintenance test flights. Evaluates operational readiness of medium helicopters and recommends corrective actions. Inspects crash damaged helicopters and estimates manhours, parts, and costs to repair. Performs complete technical inspections of installed assemblies and systems on helicopters to ensure that repairs comply with prescribed standards. TECHNICAL GUIDANCE/TRAINING. Provides technical guidance/training to repairers in proper maintenance, corrosion prevention and treatmenet echniques, and safety procedures. Maintains technical library. SUPERVISES/DIRECTS INSPECTIONS. Plans, directs, and supervises inspection activities. Ensures compliance in aircraft configuration control and spectrometric analysis program test measuring, diagnostic equipment calibration, and recertification schedules. Supervises on-the-job training program. MAINTENANCE ADMINISTRATION. Prepares evaluation reports on subordinate personnel. Performs maintenance trend analysis. Checks maintenance/supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS).

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67U30
a. Physical:	
(1) Profile: 222211	x
(2) Normal color vision	x
b. Aptitude area: MM	x
c. Other:	
(1) Must have completed TI course for award of 66U30 MOS.	x
(2) No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Medium Helicopter Technical Inspector	66U30	SSG	As a full-time positions for initial and final technical inspection of helicopters.

CMF 67
OBSERVATION/SCOUT HELICOPTER REPAIRER
(Obsn/Scout Hel Rep)
MOS 67V
Summary

Supervises and performs maintenance on observation/scout helicopters, excluding repair of systems components.

Duties

MOSC 67V10: Performs aviation unit, intermediate, and depot maintenance on observation/scout helicopters. Performs air crewmember duties as required. REMOVES/REPLACES/INSTALLS SUBSYSTEMS. Removes and installs subsystem assemblies such as engines, transmission, gearboxes, flight controls, flight control hydraulic components, rotor hubs, and rotor blades. Removes and replaces subsystems components such as starters, generators, inverters, voltage regulators, lights, batteries, pumps, reservoirs, valves, hydraulic cylinders, and hoses. CLEANS/SERVICES HELICOPTERS. Services and lubricates helicopters and subsystems. Prepares helicopters for extensive inspection and maintenance by removing and replacing items such as cowling, inspection plates, panels, floorboards, doors, and auxiliary equipment. Performs maintenance operational checks and scheduled and special helicopter inspections. DIAGNOSIS/TROUBLESHOOTS. Performs diagnostic and troubleshooting duties on helicopter subsystems using special tools and diagnostic equipment as required. Troubleshoots rotor system malfunctions. HELICOPTER STORAGE/SHIPMENT/REMOVAL PREPARATIONS. Prepares helicopters for entry into and removal from storage, for shipment by surface or air, and returns them back in flyable condition. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for helicopter maintenance and ground handling. Uses and performs user maintenance on common and special tools. FORMS/RECORDS MAINTENANCE. Prepares maintenance forms and records related to MOS.

MOSC 67V20: Performs aviation unit, intermediate, and depot maintenance on observation/scout helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

MOSC 67V30: Supervises aviation unit, intermediate, and depot maintenance on observation/scout helicopters. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow in terms of resources and facilities. Applies production control, quality control, and other maintenance management principles to shop, flight line, and supply operations. Supervises and evaluates work performance in observation/scout helicopter maintenance and flight line facilities in terms of compliance with directives, technical manuals, work standards, and operational policies. Monitors maintenance operational checks and test flights. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients instructs personnel, and conducts on-the-job training programs in helicopter maintenance, supply, and safety techniques.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67V10	MOSC 67V20	MOSC 67V30
a. Physical:			
(1) Profile: 222211	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Observation/Scout Helicopter Repairer	67V10	PFC		1	1	2	2	2	2	3	3	3	Grades of additional positions will be authorized in same pattern.
2	Observation/Scout Helicopter Repairer	67V10	SP4	1	1	1	1	2	2	3	3	4	4	
3	Observation/Scout Helicopter Repairer	67V20	SGT			1	1	1	2	2	2	2	3	Grades of air crewmembers will be determined in same manner.
4	Observation/Scout Helicopter Maintenance Supervisor	67V30	SSG											For supervision of personnel engaged in observation/scout helicopter maintenance as follows:

	E6
9-20	1
21-40	2
41 or more	3

CMF 67
OBSERVATION/SCOUT HELICOPTER TECHNICAL INSPECTOR
(Obsn/Sct Hel TI)
MOS 66V
Summary

Performs technical inspections and monitors the quality control program on observation/scout helicopters to determine maintenance requirements and to ensure that maintenance has been performed.

Duties

<u>MOSC 66V20: Performs technical inspections and monitors the quality control program on observation/scout helicopters.</u> CHECKS/CONSULTS RECORDS AND CREWS. Checks aircraft flight and maintenance records to determine adherence to prescribed maintenance standards. Consults flight crews on unusual operation of helicopters. INSPECTIONS. Conducts thorough inspections, both initial and final, on observattion/scout helicopters using technical publications and checklists. Performs operational checks and troubleshoots helicopter systems to detect present and incipient malfunctions. Participates in maintenance test flights. Evaluates operational readiness of helicopters and recommends corrective actions. Inspects crash damaged helicopters and estimates manhours, parts, and costs to repair. Performs complete technical inspections of installed assemblies and systems on helicopters to ensure that repairs comply with prescribed standards. TECHNICAL GUIDANCE/TRAINING. Provides technical guidance/training to repairers in proper maintenance, corrosion prevention and treatment techniques, and safety procedures. Maintains technical library.

<u>MOSC 66V30: Performs technical inspections and monitors the quality control program on observation/scout helicopters.</u> Performs duties of preceding skill level and provides technical guidance to subordinate personnel. Computes helicopter weight and balance. SUPERVISES/DIRECTS INSPECTIONS. Plans, directs, and supervises inspection activities. Ensures compliance in aircraft configuration control and spectrometric analysis program, test measuring, diagnostic equipment calibration, and recertification schedules. Supervises on-the-job training programs. MAINTENANCE ADMINISTRATION. Prepares evaluation reports on subordinate personnel. Performs maintenance trend analysis. Checks maintenance/supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS).

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 66V20	MOSC 66V30
a. Physical:		
(1) Profile: 222211	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other:		
(1) Must have 18 months experience in MOS 67V at Skill Level 2 and have completed the TI course for award of this MOS.	x	
(2) No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Observation/Scout Helicopter Technical Inspector	66V20	SGT	As a full time positions for initial and final technical inspection of observation/schout helicopters as follows:
2	Observation/Scout Helicopter Technical Inspector	66V30	SSG	

TI Auth	E5	E6
1	-	1
2	1	1
3	2	1
4	2	2
5	3	2

RESERVE FORCES
CMF 67
HEAVY LIFT HELICOPTER REPAIRER
(Heavy Lift Hel Rep)
MOS 67X
Summary

Supervises and performs maintenance on heavy lift helicopters, excluding repair of systems components.

Duties

MOSC 67X10: Performs aviation unit, intermediate, and depot maintenance on heavy lift helicopters. Performs air crewmember duties. REMOVES/REPLACES/INSTALLS SUBSYSTEMS. Removes and installs subsystem assemblies such as engines, transmissions, gearboxes, flight controls, flight control hydraulic components, rotor hubs, and rotor blades. Removes and replaces subsystems components such as starters, generators, inverters, voltage regulators, lights, batteries, pumps, reservoirs, valves, hydraulic cylinders, and hoses. CLEANS/SERVICES HELICOPTERS. Services and lubricates helicopters and subsystems. Prepares helicopters for extensive inspection and maintenance by removing and replacing items such as cowling, inspection plates, panels, floorboards, doors, and auxiliary equipment. Performs maintenance operational checks and scheduled and special helicopter inspections. DIAGNOSIS/TROUBLESHOOTS. Performs diagnostic and troubleshooting duties on helicopter subsystems using special tools and diagnostic equipment as required. Troubleshoots rotor system malfunctions. HELICOPTER STORAGE/SHIPMENT/REMOVAL PREPARATIONS. Prepares helicopters for entry into and removal from storage, for shipment by surface transportation, and returns them back in flyable condition. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for helicopter maintenance and ground handling. Uses and performs user maintenance on common and special tools. FORMS/RECORDS MAINTENANCE. Prepares maintenance forms and records related to MOS.

MOSC 67X20: Performs aviation unit, intermediate, and depot maintenance on heavy lift helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

MOSC 67X30: Supervises aviation unit, intermediate, and depot maintenance on heavy lift helicopters. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow in terms of resources and facilities. Applies production control, quality control, and other maintenance management principles to shop, flight line, and supply operations. Supervises and evaluates work performance in heavy lift helicopter maintenance and flight line facilities in terms of compliance with directives, technical manuals, work standards, and operational policies. Monitors maintenance operational checks and test flights. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients and instructs personnel and conducts on-the-job training programs in helicopter maintenance, supply, and safety techniques.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67X10	MOSC 67X20	MOSC 67X30
a. Physical:			
(1) Profile: 222211	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Heavy Lift Helicopter Repairer	67X10	PFC		1	2	2	3	3	3	4	5	5	Grades of additional positions will be authorized in same pattern.
2	Heavy Lift Helicopter Repairer	67X10	SP4	1	1	1	1	1	2	3	3	3	3	
3	Heavy Lift	67X20	SGT				1	1	1	1	1	1	2	
4	Air Crewmember	67X10	SP4		1	2	2	3	3	4	4	5	5	Grades of air crewmembers will be determined in this pattern.
5	Air Crewmember	67X20	SGT	1	1	1	2	2	3	3	4	4	5	
6	Heavy Lift Helicopter Supervisor/Section Chief/ Asstistant Platoon Sergeant	67X30	SSG											For supervision of personnel engaged in heavy lift helicopter maintenance as follows:

	E6
8-20	1
21-40	2
41-60	3
61 or more	4

RESERVE FORCES
CMF 67
HEAVY LIFT HELICOPTER TECHNICAL INSPECTOR
(Heavy Lift Hel TI)
MOS 66X
Summary

Performs technical inspections and monitors the quality control program on heavy lift helicopters to determine maintenance requirements and to ensure that maintenance has been performed.

Duties

MOSC 66X30: Performs technical inspections and monitors the quality control program on heavy lift helicopters. CHECKS/CONSULTS RECORDS AND CREWS. Checks aircraft flight and maintenance records to determine adherence to prescribed maintenance standards. Consults flight crews on unusual operation of helicopters. INSPECTIONS. Conducts thorough inspections, both initial and final, and heavy lift helicopters, using technical publications and checklists. Performs operational checks and troubleshoots helicopter systems to detect present and incipient malfunctions. Computes helicopter weight and balance. Participates in maintenance test flights. Evaluates operational readiness of helicopters and recommends corrective actions. Inspects crash damaged helicopters and estimates manhours, parts, and costs, to repair. Performs complete technical inspections of installed assemblies and systems on helicopters to ensure that repairs comply with prescribed standards. TECHNICAL GUIDANCE/TRAINING. Provides technical guidance/training to repairers in proper maintenance, corrosion prevention and treatmenet techniques, and safety procedures. Maintains technical library. SUPERVISES/DIRECTS INSPECTIONS. Plans, directs, and supervises inspection activities. Ensures compliance in aircraft configuration control and spectrometric analysis program, test measuring, diagnostic equipment calibration, and recertification schedules. Monitors on-the-job training programs. MAINTENANCE ADMINISTRATION. Prepares evaluation reports on subordinate personnel. Performs maintenance trend analysis. Checks maintenance/supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS).

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 66X30
a. Physical:	
(1) Profile: 222211	x
(2) Normal color vision	x
b. Aptitude area: MM	x
c. Other:	
(1) Must have completed TI course for award of 66X30 MOS.	
(2) No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Heavy Lift Helicopter Technical Inspector	66X30	SSG	As full-time positions for initial and final inspection of heavy lift helicopters.

CMF 67
ATTACK HELICOPTER REPAIRER
(Attack Hel Rep)
MOS 67Y
Summary

Supervises and performs maintenance on attack helicopters, excluding repair of systems components.

Duties

MOSC 67Y10: Performs aviation unit, intermediate, and depot maintenance on attack helicopters. REMOVES/REPLACES/INSTALLS SUBSYSTEMS. Removes and installs subsystem assemblies such as engines, transmissions, gearboxes, flight controls, flight control hydraulic components, rotor hubs, and rotor blades. Removes and replaces subsystems components such as starters, generators, inverters, voltage regulators, lights, batteries, pumps, reservoirs, valves, hydraulic cylinders, and hoses. CLEANS/SERVICES HELICOPTERS. Services and lubricates helicopters and subsystems. Prepares helicopters for extensive inspection and maintenance by removing and replacing items such as cowling, inspection plates, panels, floorboards, doors, and auxiliary equipment. Performs maintenance operational checks and scheduled and special helicopter inspections. DIAGNOSIS/TROUBLESHOOTS. Performs diagnostic and troubleshooting duties on helicopter subsystems using special tools and diagnostic equipment as required. Troubleshoots rotor system malfunctions. HELICOPTER STORAGE/SHIPMENT/REMOVAL PREPARATIONS. Prepares helicopters for entry into and removal from storage, for shipment by surface or air, and places them back in flyable condition. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for helicopter maintenance and ground handling. Uses and performs user maintenance on common and special tools. FORMS/RECORDS MAINTENANCE. Prepares maintenance forms and records related to MOS.

MOSC 67Y20: Performs aviation unit, intermediate, and depot maintenance on attack helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

MOSC 67Y30: Supervises aviation unit, intermediate, and depot maintenance on attack helicopters. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow in terms of resources and facilities. Applies production control, quality control, and other maintenance management principles to shop, flight line, and supply operations. Supervises and evaluates work performance in attack helicopter maintenance and flight line facilities in terms of compliance with directives, technical manuals, work standards, and operational policies. Monitors maintenance operational checks and test flights. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients, instructs personnel, and conducts on-the-job training programs in helicopter maintenance, supply, and safety techniques.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 67Y10	MOSC 67Y20	MOSC 67Y30
a. Physical:			
(1) Profile: 323222	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized										Explanatory Notes
				1	2	3	4	5	6	7	8	9	10	
1	Attack Helicopter Repairer	67Y10	*PFC	* 1	1	1	1	2	3	3	4	4	4	Grades of additional positions will be authorized in same pattern.
2	Attack Helicopter Repairer	67Y10	SP4			1	2	2	2	2	2	3	4	
3	Attack Helicopter Repairer	67Y20	SGT		1	1	1	1	1	2	2	2	2	*In units where only one 67Y position is authorized that one position will be graded SP4.
4	Attack Helicopter Maintenance Supervisor	67Y30	SSG											For supervision of personnel engaged in attack helicopter maintenance as follows:

	E6
7-19	1
20-38	2
39 or more	3

CMF 67

ATTACK HELICOPTER TECHNICAL INSPECTOR

(Attack Hel TI)

MOS 66Y

Summary

Performs technical inspections and monitors the quality control program on attack helicopters to determine maintenance requirements and to ensure that maintenance has been performed.

Duties

MOSC 66Y20: Performs technical inspections and monitors the quality control program on attack helicopters. CHECKS/CONSULTS RECORDS AND CREWS. Checks aircraft flight and maintenance records to determine adherence to prescribed maintenance standards. Consults flight crews on unusual operations of helicopters. INSPECTIONS. Conducts thorough inspections, both initial and final, on attack helicopters using technical publications and checklists. Performs operational checks and troubleshoots helicopter systems to detect present and incipient malfunctions. Participates in maintenance test flights. Evaluates operational readiness of helicopters and recommends corrective actions. Inspects crash damaged helicopters and estimates manhours, parts, and costs to repair. Performs complete technical inspections of installed assemblies and systems on helicopters to ensure that repairs comply with prescribed standards. TECHNICAL GUIDANCE/TRAINING. Provides technical guidance/training to repairers in proper maintenance, corrosion prevention and treatment techniques, and safety procedures. Maintains technical library.

MOSC 66Y30: Performs technical inspections and monitors the quality control program on attack helicopters. Performs duties of preceding skill level and provides technical guidance to subordinate personnel. Computes helicopter weight and balance. SUPERVISES/DIRECTS INSPECTIONS. Plans, directs, and supervises inspection activities. Ensures compliance in aircraft configuration control and spectrometric analysis program, test measuring, diagnostic equipment calibration, and recertification schedules. Supervises on-the-job training programs. MAINTENANCE ADMINISTRATION. Prepares evaluation reports on subordinate personnel. Performs maintenance trend analysis. Checks maintenance/supply documents to ensure compliance with product quality control standards and the Army Maintenance Management System (TAMMS).

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 66Y20	MOSC 66Y30
a. Physical:		
(1) Profile: 222211	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other:		
(1) Must have 18 months experience in MOS 67Y Skill Level 2 and have completed the TI course for award of this MOS.	x	
(2) No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621

Federal Civil Service Classification	Code
Aircraft Mechanical	WG 8853
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Attack Helicopter Technical Inspector	66Y20	SGT	As a full-time positions for initial and final technical inspection of attack helicopters as follows:
2	Attack Helicopter Technical Inspector	66Y30	SSG	

TI Auth	E5	E6
1	-	1
2	1	1
3	2	1
4	2	2

CMF 67
AIRCRAFT MAINTENANCE SENIOR SERGEANT
(Acft Maint Sr Sgt)
MOS 67Z
Summary

Supervises aircraft maintenance at aviation unit, intermediate, and depot levels.

Duties

MOSC 67Z40: Serves as principal NCO in helicopter maintenance activities. DETERMINES MAINTENANCE FACILITIES REQUIREMENTS. Plans and lays out helicopter maintenance areas and facilities. DETERMINES REQUIREMENTS AND SUPERVISES MAINTENANCE ACTIVITIES. Determines manhours and parts requirements to repair helicopters and associated equipment. Coordinates work, assigns duties, and instructs subordinates in maintenance work techniques and procedures. Supervises and applies production control, quality control, and other maintenance management principles and procedures. Advises personnel in diagnosing complex malfunctions. Ensures that shop safety principles and procedures are observed. Maintains supply economy and discipline. Prepares evaluations, special reports, and records pertaining to helicopter maintenance and related activities. Supervises on-the-job training program. Supervises preparation of work orders, requisitions, recurring reports, and correspondence. PLANS AND POLICIES. Assists in preparation of plans and policies.

MOSC 67Z50: Supervises aircraft maintenance and related administrative functions. Serves as principal NCO of aircraft maintenance unit or of a maintenance/operations section. Performs principal noncommissioned officer duties associated with SQI "M." DETERMINES MAINTENANCE FACILITIES REQUIREMENTS. Plans and lays out aircraft maintenance areas, component repair shops, and facilities. DETERMINES REQUIREMENT, SUPERVISES, AND COORDINATES MAINTENANCE ACTIVITIES. Advises personnel in diagnosing complex malfunctions and assists in determining maintenance requirements. Coordinates work, assigns duties, and instructs subordinates in maintenance work techniques and procedures. Ensures that proper maintenance techniques have been employed by use of quality assurance inspections. Enforces shop safety principles and procedures including storage requirements for POL, paint, and other volatile materials. Maintains supply economy and discipline. Supervises and participates in preparation of studies, evaluations, special reports, and records pertaining to aircraft maintenance and components repair operations, training, and related activities. Supervises the preparation of work orders, reports, and correspondence. Applies production, quality control, and other maintenance management principles and procedures to maintenance activities. Processes work orders and allocates maintenance responsibilities. MAKES RECOMMENDATIONS. Recommends such actions as reassignment of duties and requirements for training to improve work performance.

QUALIFICATIONS

Must possess the following cumulative qualifications:

	67Z40	67Z50
a. Physical Profile: 323222	x	
b. Aptitude area: MM	x	
c. Other: No record of conviction of any Federal or State statute for manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
None	

Federal Civil Service Classification	Code
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Platoon/Section Sergeant	67Z40	PLT SGT SFC	In helicopter units less than company size authorized 20 or more personnel (MOS 67/68) involved in aircraft maintenance.
2	Platoon Sergeant	67Z40	PLT SGT	In helicopter flight platoon in company size units, in AVUM maintenance/service platoon, in AVIM level maintenance platoon.
3	Section Sergeant	67Z40	SFC	In maintenance section of assault support helicopter company and in AVIM maintenance sections as follows: 17-54 1 55 or more 2
4	Production Control Sergeant	67Z40	SFC	In AVIM maintenance company.
5	Aircraft Maintenance NCO	67Z40	SFC	In aviation battalion or comparable unit.
6	Aircraft Maintenance Sergeant	67Z50	MSG	AVIM maintenance company as aircraft production control NCO.
7	First Sergeant	67Z5M	1SG	As principal NCO in aviation unit.
8	Aircraft Maintenance Senior Sergeant	67Z50	SGM	As principal NCO in maintenance/operations section of aircraft depot level maintenance, at aviation groups, Army Readiness Region Hq, US Agency for Aviation Safety, and Hq FORSCOM.

CMF 67
AIRCRAFT POWERPLANT REPAIRER
(Acft Powerplant Rep)
MOS 68B
Summary

Supervises, inspects or performs maintenance on aircraft turbine engines and components.

Duties

MOSC 68B10: Performs aviation unit, intermediate, and depot maintenance on aircraft powerplants. AIRCRAFT ENGINE/COMPONENTS REPAIR/SERVICE. Removes, replaces, services, prepares, preserves, cleans, and stores engine assemblies or components. Disassembles, repairs, reassembles, adjusts, and tests turbine engine systems, subsystems, and components. GROUND SUPPORT/EQUIPMENT/TOOS MAINTENANCE. Uses and maintains ground support equipment required for aircraft maintenance. Uses and performs user maintenance and common and special tools. FORMS/RECORDS/REPORT REQUIREMENTS. Prepares requests for turn-ins and repair parts. Prepares forms and records related to MOS.

MOSC 68B20: Performs aviation unit, intermediate, and depot maintenance on aircraft power systems. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 68B10	MOSC 68B20
a. Physical:		
(1) Profile: 323222	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
E1	Propeller Assembly Maintenance
Z5	Modular Engine Test Stand (METS)
D6	Lighter Air Cushion Vehicle Engine Maintainer

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Engine Mechanic	621.281
Engine Tester	621.281

Federal Civil Service Classification	Code
Aircraft Engine Disassembly	WG 8653
Aircraft Engine Overhaul Supervising	WG 8651
Aircraft Jet Engine Assembly	WG 8661
Aircraft Propeller Inspecting	WG 8554
Aircraft Propeller Repairing	WG 8553

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized								Explanatory Notes
				1	2	3	4	5	6	7	8	
1	Aircraft Powerplant Repairer	68B10	PFC		1	1	2	2	2	2	3	Grades of additional positions will be authorized in same pattern.
2	Aircraft Powerplant Repairer	68B10	SP4	1	1	1	1	1	2	2	2	
3	Aircraft Powerplant Repairer	68B20	SGT			1	1	2	2	3	3	

CMF 67
AIRCRAFT POWERTRAIN REPAIRER
(ACFT Powertrain Rep)
MOS 68D
Summary

Supervises, inspects, performs nondestructive tests, and maintains helicopter powertrain subsystems and components.

Duties

MOSC 68D10: Performs aviation unit, intermediate, and depot maintenance on helicopter powertrain subsystems and components. REMOVES/REPLACES/ DISASSEMBLES ASSEMBLES/SERVICES COMPONENTS. Removes and replaces powertrain quills, transmission adapting parts, and rotary wing hub oil tanks. Disassemble friction dampers and hanger assemblies. Disassembles, repairs, reassembles, adjusts, and tests powertrain components, systems, and subsystems. Applies corrosion preventative procedures, cleans, preserves, and stores powertrain components. Balances and aligns main and tail rotor hub assemblies. Obtains/prepares oil samples for analysis. NONDESTRUCTIVE INSPECTIONS. Performs nondestructive inspections on aircraft components and related items. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for helicopter maintenance. Uses and performs user maintenance on common and special tools. FORMS/RECORDS/REPORT REQUIREMENTS. Prepares and uses aircraft forms and records related to MOS.

MOSC 68D20: Performs aviation unit, intermediate, and depot maintenance on helicopter powertrain systems. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 68D10	MOSC 68D20
a. Physical:		
(1) Profile: 323222	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Engine Mechanic	621
Airplane Mechanic	

Federal Civil Service Classification	Code
Aircraft Components and Accessories Repair Supervision	WG 8852
Aircraft Mechnical	WG 8853

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	Explanatory Notes
1	Helicopter Powertrain Repairer	68D10	* PFC	* 1	1	1	2	2	3	3	3	Grades of additional positions will be authorized in same pattern.
2	Helicopter Powertrain Repairer	68D10	SP4			1	1	2	2	2	3	
3	Helicopter Powertrain Repairer	68D20	SGT		1	1	1	1	1	2	2	*In units where only one 68D position is authorized, that one position will be graded SP4.

CMF 67
AIRCRAFT ELECTRICIAN
MOS 68F
Summary

Supervises, inspects or performs electrical maintenance on aircraft electrical systems, components, and instruments.

Duties

MOSC 68F10: Performs aviation unit, intermediate, and depot maintenance on aircraft electrical subsystems. TROUBLESHOOTS/REPAIRS. Applies troubleshooting techniques to diagnose and localize malfunctions to specific electrical/electronic components, including solid state and transistorized subsystems. Repairs aircraft instrument systems. Applies principles of electricity/electronics, hydroscopic motion, pneumatics, and hydraulics applicable to repair of aircraft instruments. Repairs printed circuits and nickel cadmium batteries. Repairs, adjusts, and tests electrical/electronic elements of assemblies and components. REMOVES/REPLACES/SERVICES. Removes and replaces aircraft instruments, electrical/electronic elements of assemblies, and components. Cleans, preserves, and stores electrical/ electronic components and aircraft instruments. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for aircarft maintenance. Uses and performs user maintenance on common and special tools. Maintains aircraft battery shop. FORMS/RECORDS PREPARATION. Prepares and uses maintenance forms related to MOS.

MOSC 68F20: Performs aviation unit intermediate, and depot support maintenance on aircraft electrical subsystems. *Performs duties of preceding* skill level and provides technical guidance to subordinates.

MOSC 68F30: Supervises aviation unit intermediate, and depot maintenance on aircraft electrical systems. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow. Applies production control, quality control, and other maintenance management principles and procedures to electrical systems maintenance. Supervises and evaluates work performance in electrical systems maintenance in terms of compliance with directives, technical manuals, work standards, and operational policies. Performs inspections of electrical subsystems and components before, during, and after repair or modification to ensure that completed repairs are performed within prescribed specificationS. Monitors shop and flight line safety procedures. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients, instructs personnel and conducts on-the-job training in aircraft electrical systems maintenance, supply, and safety techniques.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 68F10	MOSC 68F20	MOSC 68F30
a. Physical:			
(1) Profile: 323222	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

ADDITIONAL SKILL IDENTIFIERS

Code	Title
Z5	Modular Engine Test Stand (METS)

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Electrician, Airplane	825.281
Instrument Man	710.271

Federal Civil Service Classification	Code
Aircraft Instrument and Control System Mechanical	WG 3355
Aircraft Systems Electrical	WG 2892
Airframe Electrical Equipment Installation Inspecting	WG 2895
Electrical Indicating Instrument Repairing	WG 3358

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized										Explanatory Notes
				1	2	3	4	5	6	7	8	9	10	
			*	*										
1	Aircraft Electrician	68F10	PFC	1	1	2	3	3	3	3	4	4	4	Grades of additional positions will be authorized in same pattern.
2	Aircraft Electrician	68F10	SP4					1	1	1	1	1	1	
3	Aircraft Electrician	68F20	SGT		1	1	1	1	2	3	3	4	5	*In units where only one 68F position is authorized, that one position, will be graded SP4.
4	Aircraft Electrical Systems Repair Supervisor	68F30	SSG											For supervision of 5 or more personnel engaged in aircraft electrical systems maintenance.

CMF 67
AIRCRAFT STRUCTURAL REPAIRER
(Acft Structural Rep)
MOS 68G
Summary

Supervises and performs maintenance and repair of aircraft structures at aviation unit, intermediate, and depot levels.

Duties

MOSC 68G10: Performs aviation unit, intermediate, and depot maintenance on aircraft structures and control surfaces. REMOVES/REPAIRS/REPLACES/INSTALLS/ STRUCTURE COMPONENTS. Removes and installs mechanical-lock blind rivets, common and solid shank rivets, lock bolt rivets, nut-plates, turnlock fasteners, threaded pin type fasteners, and other special-purpose fasteners and rivets. Repairs dents and buckles by installing doublers and stiffeners. Applies overlay and flush patches on stressed aircraft skin. Applies sealants and sealing compounds to aircraft structures. Repairs honeycomb-structured panels such as floor panels, work decks, and avionics shelves. Mixes and applies fiber glass materials. Makes emergency and permanent repairs to transparent plastic windows and enclosures. Performs welding maintenance on aircraft structures when awarded the ASI. Removes, repairs, and replaces aircraft deicing boots. Performs structural repair of helicopter rotor blades. Replaces and repairs stringers, longerons, bulkheads, countersinks and dimples metal, and beams. Uses common measuring tools, precision measuring gages and instrument, alignment fixtures, and supports to perform structural repairs. PRIMES/PAINTS. Mixes and applies primers and paints to aircraft surfaces, including layout and painting of aircraft markings. FABRICATES METAL FORMS. Fabricates structural parts, forming blocks, and shapes metal using stretching, shrinking, and other metalforming techniques. SHOP STOCK STORAGE. Determines shop and bench stock requirements and requests them. Maintains facilities for storage of flammable and hazardous materials. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for aircarft maintenance. Uses and performs user maintenance on common and special tools. FORMS/RECORDS: Prepares forms and records related to the MOS.

MOSC 68G20: Performs aviation unit, intermediate, and depot maintenance on aircraft structures and control surfaces. Performs duties of preceding skill level and provides technical guidance for subordinate personnel.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 68G10	MOSC 68G20
a. Physical:		
(1) Profile: 323222	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
Q1	Welder

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanics and Repairmen	621.281
Assembler, Aircraft Powerplant	621.381
Sheet Metal Worker	804.281
Welder, Combination	812.884

Federal Civil Service Classification	Code
Aircraft Propeller Inspector	WG 8554
Aircraft Propeller Repairing	WG 8553
Aircraft Sheet Metal Manufacturing	WG 3861
Aircraft Welding	WG 3752

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Aircraft Structural Repairer	68G10	PFC		1	1	1	2	2	3	3	3	4	Grades of additional positions will be authorized in same pattern.
2	Aircraft Structural Repairer	68G10	SP4	1	1	1	2	2	2	2	3	3	3	
3	Aircraft Structural Repairer	68G20	SGT			1	1	1	2	2	2	3	3	

CMF 67
AIRCRAFT PNEUDRAULICS REPAIRER
(Acft Pneudraulics Rep)
MOS 68H
Summary

Supervises and performs maintenance on aircraft pneudraulic systems and components.

Duties

MOSC 68H10: Performs aviation unit, intermediate, and depot maintenance on aircraft pneudraulic subsystems and components. REMOVES/REPAIRS/INSTALLS/TESTS SUBSYSTEMS. Removes and installs hydraulic components such as tubing assemblies, hoses, valves, pressure transmitters, and switches. Disassembles, repairs, reassembles, adjusts, and tests hydraulic systems, subsystems, and components. Fabricates tubes and hoses. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for helicopter maintenance. Uses and performs user maintenance on common and special tools. FORMS/RECORDS. Prepares and uses forms and records related to the MOS.

MOSC 68H20: Performs aviation unit, intermediate, and depot maintenance on aircraft pneudraulic subsystems and components. Performs duties of preceding skill level and provides technical guidance to subordinate personnel.

MOSC 68H30: Supervises aviation unit, intermediate, and depot maintenance on aircraft pneudraulics systems and subsystems. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow. Applies production control, quality control, and other maintenance management principles and procedures to shop operations. Supervises and evaluates work performance in pneudraulic systems maintenance in terms of compliance with directives, technical manuals, work standards, and operational policies. Performs inspections of pneudraulics subsystems and components before, during, and after repair or modification to ensure that completed repairs are performed within prescribed specifications. Monitors shop and flight line safety procedures. PROVIDES TECHNICAL GUIDANCE/TRAINING. Orients, instructs personnel, and conducts on-the-job training programs in pneudraulic system maintenance, supply, and safety techniques.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 68H10	MOSC 68H20	MOSC 68H30
a. Physical:			
(1) Profile: 323222	x		
(2) Normal color vision	x		
b. Aptitude area: MM	x		
c. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x		

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Aircraft Mechanic, Plubming and Hydraulics	862.381
Precision Assembler, Bench	706.781

Federal Civil Service Classification	Code
Aircraft Fluid and Gas Systems Mechnical	WG 8864

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	Explanatory Notes
			*	*						
1	Aircraft Pneudraulics Repairer	68H10	PFC	1	1	2	2	3	4	Grades of additional positions will be authorized in same pattern.
2	Aircraft Pneudralics Repairer	68H10	SP4							*In units where only 1 68H position is authorized, that one position will be graded SP4.
3	Aircraft Pneudraulics Repairer	68H20	SGT	1	1	1	2	2		
4	Aircraft Pneudraulics Maintenance Supervisor	68H30	SSG							For supervision of 3 or more workers engaged in aircraft pneudraulics systems maintenance.

CMF 67
AIRCRAFT FIRE CONTROL REPAIRER
(ACFT FC REPAIRER)
MOS 68J
Summary

Performs aviation unit, intermediate, and depot maintenance on electrical and electronic components of aircraft weapons fire control systems.

Duties

MOSC 68J10: Performs aviation unit, intermediate, and depot maintenance on aircraft weapons fire control systems. MAINTAINS EQUIPMENT. Safes weapons, removes, installs, assembles, disassembles fire control systems components and subsystems. Performs initial boresighting set up procedures for all aircraft fire control systems. Performs maintenance on fire control units to include alignment of weapons with associated sighting elements, electronic or mechanical devices. Performs authorized modifications on fire control and supporting systems. CHECKS/TROUBLESHOOT/TESTS. Perform operatinal checks on all aircraft fire control systems. Checks, removes, disassembles, repairs, assembles, installs, tests, and adjusts fire control systems and supporting components. Troubleshoots, isolates, and corrects malfunctions in electronic and electrical components. Tests/Troubleshoots, and repairs system peculiar test sets, diagnostic equipment, and special tools. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains ground support equipment required for aircraft maintenance. Uses and performs user maintenance on common and special tools.

MOSC 68J20: Performs aviation unit, intermediate, and depot maintenance on aircraft weapons fire control systems. Performs duties of preceding skill level and provides technical guidance for subordinates.

MOSC 68J30: Supervises and performs aviation unit, intermediate, and depot maintenance on aircraft weapon systems and fire control systems. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow. Applies production control, quality control, and other maintenance management principles and procedures to aircraft weapon systems and fire control systems maintenance. Supervises and evaluates work performance in terms of compliance with directives, technical manuals, work standards, and operational policies. Performs inspections of aircraft weapon systems, fire control systems, and components before, during, and after repair or modification to ensure that completed repairs are performed within prescribed specifications. Monitors shop and flight line safety procedures. PROVIDES TECHNICAL GUIDANCE TRAINING. Orients, instructs personnel, and conducts on-the-job training in aircraft weapons and fire control systems maintenance, supply, and safety techniques.

MOSC 68J40: Supervises aviation unit, intermediate, and depot maintenance on aircraft weapon systems and fire control systems. DETERMINES MAINTENANCE FACILITIES REQUIREMENTS. Plans and lays out aircraft weapons and fire control systems maintenance and repair shops and facilities. DETERMINES REQUIREMENTS AND SUPERVISES MAINTENANCE ACTIVITIES. Determines manhours and parts requirements to repair aircraft weapons and fire control systems and associated equipment. Coordinates work, assigns duties, and instructs subordinates in maintenance work techniques and procedures. Supervises and applies production control, quality control, and other maintenance management principles and procedures. Advises personnel in diagnosing complex malfunctions. Ensures that shop safety principles and procedures are observed. Maintains supply economy and discipline. Prepares evaluations, special reports, and records pertaining to aircraft weapons and fire control systems maintenance, repair, and related activites. Supervises on-the-job training program. Supervises preparation of work orders, requisitions, recurring reports, and correspondence. PLANS AND POLICIES. Assists in preparation of plans and policies.

QUALIFICATIONS

Must possess the following cumulative qualifications:	MOSC 68J10	MOSC 68J20	MOSC 68J30	MOSC 68J40
a. Physical:				
(1) Profile: 323222	x			
(2) Normal color vision	x			
b. Aptitude area: GM/EL	x			
c. Know:				
(1) Electrical/electronic theory	x			
(2) Basic computer principles	x			
(3) Optic principles	x			
(4) Principles of high power light transmission (Laser)	x			
(5) Principles of infrared and night version for control devices	x			
d. Other: No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x			

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Electronic Instruement Repairmen	729.281
Electronic Technician	003.181
Ordnanceman	632.281
Assembler III	736.884

Federal Civil Service Classification	Code
Electronic Equipment Making, Installing, and Reparing	WG 2614
Fire Control Instrument Inspecting	WG 2612
Fire Control Instrument Making, Installing, and Reparing	WG 2613
Optical Instrument Reparing	WG 3306

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized 1	2	3	4	5	6	7	8	9	10	Explanatory Notes
1	Aircraft Fire Control Repairer	68J10	PFC		1	1	1	2	2	2	3	3	4	Grades of additional positions will be authorized in same pattern.
2	Aircraft Fire Control Repairer	68J10	SP4	1	1	1	2	2	3	3	3	3	3	
3	Aircraft Fire Control Repairer	68J20	SGT			1	1	1	1	2	2	3	3	
4	Acft Armament Systems Repair Supervisor/Section Chief	68J30	SSG											For supervision of personnel engaged in maintenance of aircraft fire control systems and weapons systems as follows: E6 6-23 1 24-46 2 47 or more 3
5	Acft Armament Systems Repair Supervisor/Platoon Sergeant	68J40	SFC											For supervision of 12 or more personnel engaged in 68J/68M duties.

CMF 67
AIRCRAFT COMPONENT REPAIR SUPERVISION
(Acft Comp Rep Sup)
MOS 68K
Summary

Supervises maintenance operations of aircraft component repair.

Duties

MOSC 68K30: Supervises personnel performing duties of MOS 68B, 68D, and 68G in aircraft components repair and related functions at aviation unit, intermediate, and depot maintenance levels. MAINTENANCE MANAGEMENT/SUPERVISION. Plans work flow. Applies production control, quality control, and other maintenance management principles and procedures to shop operations. Supervises and evaluates work performance on aircraft components repair in terms of compliance with directives, technical manuals, work standards, and operational policies. Performs inspections of components before, during, and after repair or modification to ensure that completed repairs are performed within prescribed specifications. Monitors ship and flight line safety procedures. PROVIDES TECHNICAL GUIDANCE/ TRAINING. Orients, instructs personnel, and conducts on-the-job training programs in aircraft components repair, supply, and safety techniques.

MOSC 68K40: Supervises personnel performing duties of MOS 68B, 68D, 68G, 68F and 68H in aircraft components repair and related functions at aviation unit, intermediate, and depot maintenance levels. DETERMINES MAINTENANCE FACILITIES REQUIREMENTS. Plans and lays out aircraft components maintenance areas and facilities. DETERMINES REQUIREMENTS AND SUPERVISES MAINTENANCE/REAPAIR ACTIVITIES. Determines manhours and parts requirements to repair aircraft components. Coordinates work, assigns duties, and instructs subordinates in components repair work techniques and procedures. Supervises and applies production control, quality control, and other maintenance management principles and procedures. Advises personnel in diagnosing complex malfunctions. Ensures that shop safety principles and procedures are observed. Maintains supply economy and discipline. Prepares evaluations, special reports, and records pertaining to components maintenance/repair. Supervises on-the-job training program. Supervises preparation of work orders, requisitions, recurring reports, and correspondence. PLANS AND POLICIES. Assists in preparation of plans and policies.

QUALIFICATIONS

Must possess the following qualifications:	MOSC 68K30	MOSC 68K40
a. Physical:		
(1) Profile: 323222	x	
(2) Normal color vision	x	
b. Aptitude area: MM	x	
c. Other:		
(1) Be qualified at E5 level in one of the component repair MOS (68B, 68D, or 68G).	x	
(2) No record of conviction of any Federal or State statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	x	

ADDITIONAL SKILL IDENTIFIERS

Code	Title
A2	Aviation Safety

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
None	

Federal Civil Service Classification	Code
Aircraft Repair Supervising	WG 8851

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Explanatory Notes
1	Aircraft Component Repair Supervisor/ Section Chief	68K30	SSG	For supervision of MOS 68B, 68D, and 68G personnel engaged in aviation components repair and overhaul as follows: E6 6-14 — 1 15-28 — 2 29-42 — 3 43 or more — 4
2	Aircraft Component Repair Supervisor/ Platoon Sergeant	68K40	SFC	For supervision of MOS 68B, 68D, 68F, 68G, and 68H personnel engaged in Aviation Components repair and overhaul as follows: E7 9-45 — 1 46-65 — 2 66-85 — 3 86 or more — 4

CMF 67
AIRCRAFT WEAPON SYSTEMS REPAIRER
(Acft Wpn Sys Rep)
MOS 68M
Summary

Performs aviation unit, intermediate, and depot maintenance on mechanical and hydraulic components of aircraft weapons systems, associated armament systems, and ancillary ground support equipment.

Duties

MOSC 68M10: Performs aviation unit, intermediate, and depot maintenance on hydraulic and mechanical components of aircraft weapons systems. MAINTAINS EQUIPMENT. Removes, disassembles, repairs, assembles, installs, tests, and adjusts hydraulic and mechanical components of weapons systems. Performs maintenance and authorized modifications on aircraft weapons components to include mechanical boresighting and alignment. Accomplishes boresighting set up procedures for aircraft weapons systems. Maintains support equipment and special tools. CHECKS/TROUBLESHOOT/TESTS. Perform operatinal checks, including built-in tests, on aircraft weapon systems. Checks weapons systems for mechanical and hydraulic functions. RECORD MAINTENANCE. Maintains records on weapon systems. Prepares system equipment and work orders for disposition. GROUND SUPPORT EQUIPMENT/TOOLS MAINTENANCE. Uses and maintains groud support equipment for aircraft maintenance. Uses and performs user maintenance on common and special tools.

MOSC 68M20: Performs aviation unit, intermediate, and depot maintenance on hydraulic and mechanical components on aircraft weapons systems. Performs duties of preceding skill level and provides technical guidance to subordinates.

QUALIFICATIONS

Must possess the following cumulative qualifications	MOS 68M10	MOSC 68M20
a. Physical		
(1) Profile: 323222	X	
(2) Normal color vision	X	
b. Aptitude area: MM	X	
c. Other: No record of conviction of any other Federal or State statute relating to the growing, processing, manufacture, sale disposition, possession, transportation or importation of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.	X	

RELATED CIVILIAN OCCUPATIONS

DOT Classification	Code
Ordnanceman	632.281
Assember III	736.884

Federal Civil Service Classification	Code
None	

STANDARDS OF GRADE AUTHORIZATION

Line	Duty Position	Code	Grade	Number of positions authorized										Explanatory Notes
				1	2	3	4	5	6	7	8	9	10	
1	Aircraft Weapons Systems Repairer	68M10	PFC		1	1	2	2	2	3	3	3	4	Grades of additional positions will be authorized in same manner.
2	Aircraft Weapons Systems Repairer	68M10	SP4	1	1	1	1	2	2	2	3	3	3	
3	Aircraft Weapons Systems Repairer	68M20	SGT			1	1	1	2	2	2	3	3	

APPENDIX E

BY UNIT MOS/GRADE DISTRIBUTION

	CURRENT								MOS 67G/66G					PROPOSED					
UNIT	E3	E4	E5	TI E6	E6	E7	E8	TOTAL	E3	E4	E5	TI 66G E5	TI 66G E6	E6	E7	E8	E9	TOTAL
									TOE FORCE									
25 Corps		2	2					4	2	2		1						5
62 Corps		2	2					4	2	2		1						5
207 Army	1	2	12					15	6	4	5		1	1	2			19
18 Corps		2	2	1				5	2	2		1						5
55 Army	2	3	12		1			18	7	5	5	1	1	2	1			22
56 Army	4	3	12	2				21	8	6	5	1	1	2	1			24
352d Det Aslt Hel	2		2	1				5	2	1	1	1						5
1 Avn Spt			2					2	1	1								2
6 Avn Svc			2	1				3	1	1								2
2 Avn Svc			2					2	1	1								2
72 Air Traffic		1	1					2	1	1								2
222 HHC Bn		2	5	1				8	3	2	2		1	1	1			10
7 HHC Army		1	3	1				5	2	1	1	1						5
1 Air Recon		1	6	1				8	3	2	2		1	1	1			10
73 Aer Surv	4	8	22	3	5			42							2			2
2 Air Recon	8	13	44	5	7			77	4	3	3		1	1	6			18
15 AE	7	11	25	2	2			47							6			6
172 Det AS	2	2	9	1				14							1			1
7 Svc			2	1				3	1	1								2
10 Svc			2	1				3	1	1								2
5 Svc			2	1				3	1	1								2
1 Avn Guardrail	2	2	11	2	2			19	6	4	5	1	1	1	1			19
146 Avn Fwd	6	7	25	3	1			42	7	6	5	1	1	2	2			24
330 Avn Fwd	1	3	14	2	1			21	5	4	3	1	1	1	1			16
70 Maint			1	1				2		1			1					2
568 Maint		5	4	2	1			12	2	1	2		1		1			7
45 Maint	1	2	3	2				8	2	1	1	1			1			6

	CURRENT								MOS 67G/66G					PROPOSED				
UNIT	E3	E4	E5	TI E6	E6	E7	E8	TOTAL	E3	E4	E5	TI 66G E5	TI 66G E6	E6	E7	E8	E9	TOTAL
									TDA FORCE									
FLD Station																		
SINOP			2	1				3	1	1								2
HQ Ft. Huachuca		1	2	1				4	1	1	1							3
Air Traffic				(2) Workers														
Cont				3				3	1	1								2
ENGR EUR			1					1		1								1
ENGR Div MIDDL			3	2				5	1	1	1							3
HHC 7 TNG CMD			1	1				2		1								1
AUN/SFE/STN			1	1				2		1								1
SVC CO BERLIN			1					1		1								1
USAG Ft Ord			2	1				3	1	1								2
USAG Ft Devins		1	1	1				3	1	1								2
USAG Ft Bragg		2	10	1				13	5	4	3		1	1	1			15
USAG Fort																		
Campbell	1	1	2					4	2	1	1	1						5
USAG Fort																		
McPhereson	1	1	11	1	2			16	5	5	3		1	1	1			16
USAG Texas	1	1	2	1				5	2	1	1	1						5
USAG Fort																		
S. Houston			6	2	1			9	2	2	2		1					7
USAG Polk		2	1	1				4	1	1	1							3
USAG Sheridan			4	1				5	2	1	1	1						5
USAG Riley	1	1	2	3	1			8	2	1	1	1						5
USAG Carson		2	1	1				4	1	1	1							3
USAG Presido	3	2	3		1			9	3	3	2		1	1	1			11
USAG Lewis		3	2	1				6	2	1	2		1					6
Spt Cmd HI		1	4	1				6	2	1	2		1					6
RGN 8		1	4	1				6	2	1	2		1					6
JUSMAG Greece					1			1		1								1
JUSMMAT Turkey										1								1
USELM SAUD			1	1				2	1	1								2
Avn Spt Elm		2	6	1	1			10	3	3	2		1	1	1			11
ELM ALFSEE			3	1				4	2	1	1	1						5
ELM DEFRE				1				1		1								1
FAC USMA		1						1		1								1
Aero Med Rsch		1	1					2		1								1
Devison AAF	5	10	13	3	4			35	11	9	8	1	2	2	2			35
Mat Spt Cen KD				1				1										

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	TOTAL	MOS 67G/66G PROPOSED E3	E4	E5	TI 66G E5	TI 66G E6	E6	E7	E8	E9	TOTAL
TDA FORCE																		
USA Agcy for Avn Sfty															1			1
TC Eustis	1	2	2	1				6	1	3	1		1					6
USAG Monroe		3	3	2				8	2	2	2		1					7
USAARMC																		
Knox	3	4	3	1				11	4	4	2		1	1	1			13
USAIC		1	1	1				3	1	1								2
USASC & FG		1	2					3	1	1	1							3
TC Jackson		1						1		1								1
FA Cen			3					3	1	1	1							3
AD Cen		1	1					2	1	1								2
USATCE		1	1	1				3	1	1								2
Ft Leavenworth			2					2	1	1								2
Abn Bd		1	1	1				3	1	1								2
TC Dix	1	1	2					4	2	1	1	1						5
ADM Cen & FB			2					2	1	1								2
Intel Sch	3	3	14	3	5			28							2			2
AVN Bd				1				1					1					1
Letterkenny Dp					1			1										
DEPACT LEX				1				1										
N. Cumberland Dp			1					1		1								1
Red River			1					1		1								1
Corpus Chr			1	1				2		1					1			2
Redstone Ars Spt		2	2	1	1			6	2	2	1		1					6
White Sands			3	1	2			6	1	1	1							3
Yuma PG		1	1	1				3		2								2
Engr Flt Act		2	2	1				5										
Rsch Tech Lab			1					1		1								1
Dugway PG		1						1		1								1
Acft Dev Test			2	4				6		1			1		1			3
PM Spec Elec															1			1
AARADCOM SPT			1	1				2		1								1
Elect PG			4		1			5										
Aviation Ctr				2	2			4					1		2			3
Transportation School	1	3		2	29			35	1	2		4	9	2	9			27

MOS 67H/66H

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66H E5	PROPOSED TI 66H E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	TOTAL
									TOE FORCE										
73 Aer Surv										14	13	7	1	2	2				39
2 Air Recon										22	22	11	2	3	2				62
15 AE										17	17	9	2	2	2				49
172 Det AS										5	5	3	1	1					15
146 Avn Fwd										8	8	4	1	1	1				23
330 Avn Fwd										2	2	2		1					7
568 Maint										2	1	1		1					5
45 Maint										1	1	1	1						4

MOS 67H/66H

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66H E5	PROPOSED TI 66H E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	TOTAL
TDA FORCE																			
Aero Med Rsch											1								1
Intel Sch										8	8	4	1	1	2				24
White Sands														1	1				2
Elect PG										2	1	1		1					5
Engr Flt Act										2	1	1		1					5
Acft Dev Test											1								1
Aviation Center														1					1
Transportation School											1		4	8	3				16

MOS 67N/66N

TOE FORCE

	CURRENT									PROPOSED									
UNIT	E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	E3	E4	E5	TI 66N E5	TI 66N E6	E6	E7	E8	E9	TOTAL
HHD 59 ATC		1	4	1	1				7	2	2	1		1					6
25 Corps	2	7	23	3					35	12	10	9	2	1	2				36
62 Corps	2	7	23	3					35	12	10	9	2	1	2				36
207 Army	1	1	9	1					12	5	3	3		1	1				13
18 Corps	5	5	22	3					35	12	13	7	2	1	2				37
55 Army	5	4	16	2					27	9	9	7	1	1	2				29
56 Army	4	4	16	3					27	8	9	7	2	1	1				28
132 Aslt Spt Hel		2	1						3	1	2								3
147 Aslt Spt Hel		2	1						3	1	2								3
178 Aslt Spt Hel		2	1						3	1	2								3
179 Aslt Spt Hel		2	1						3	1	2								3
243 Aslt Spt Hel		2	1						3	1	2								3
196 Aslt Spt Hel		2	1						3	1	2								3
242 Aslt Spt Hel			2						2	1	1								2
271 Aslt Spt Hel		2	1						3	1	2								3
213 Aslt Spt Hel		2	1						3	1	2								3
1 Avn Spt		2	3	1					6	2	2	1		1					6
6 Avn Svc		1	7	1					9	3	3	2		1	1				10
22 Avn Spt		10	10	1					21	8	6	6		1	1				22
357 Avn Spt		1	4						5	2	2	1		1					6
2 Avn Svc		2	2	1					5	2	1	1		1					5
39 Combat Army		1	1						2	1	1								2
36 HHC Gp Cbt			4	1					5	2	1	1		1					5
937 Gp Cbt		1	5	1					7	2	2	2		1					7
2 HHC Fwd		4	2	1	1				8	2	2	2							7
1 HHC Fwd		1	1	1					3	1	1			1					3
193 HHC Bde	2	1	4	1					8	3	2	2		1	1				9
197 HHC Bde	1	1	3	1					6	2	2	2		1					7
101 HHC Gp Cbt				1					1					1					1
159 Aslt Hel Bn		1	2						3	1	2								3
72 Air Traffic		1	4	1					6	2	2	1		1					6
11 HHC GP				2					2				1	1					2
12 HHC GP				2					2				1	1					2
222 HHC Bn	2	2	5	1	1				11	3	3	3		1	1				11
7 HHC Army		3	6	1	1				11	4	2	3		1	1				11
223 HHC		1							1										
11 HHC		1							1										
14 HHC Bn		1							1										

MOS 67N/66N

TOE FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66N E5	PROPOSED TI 66N E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
155 Av Atk Hel		1	8	1	1				11	3	4	2		1	1				11
6 HHT Bde ACCB	1	1	6	1					9	4	2	2		1	1				10
4 Air Cav Less Trp	7	7	23	3	1				41	15	13	9		3	3				43
10 Air Cav Less Trp	7	10	29	4	1				51	19	16	11		4	4				54
5 Air Cav	10	10	32	4	1				57	21	18	13		4	4				60
9 Cav Air Less Trp	9	7	23	3	1				43	15	15	9		3	3				45
7 Cav	10	10	35	7	1				63	21	21	13	3	4	4				66
17 Air Cav Less Trp	10	10	27	4	3				54	21	18	13		4	4				60
229 Atk *Hel Bn*		7	17	3					27	8	11	5		3					27
17 Sq Atk Hel Bn		7	17	3					27	8	11	5		3					27
501 Avn Cbt Bn	21	26	50	11	1				109	34	39	24	5	6	5				113
3d Avn Cbt Bn	21	26	50	11	1				109	34	39	24	5	6	5				113
503d Avn Cbt Bn	13	24	17	6	1				61	18	22	14	2	4	3				63
8th Avn Cbt Bn	13	24	17	6	1				61	18	22	14	2	4	3				63
11 Air Cav		2	4						6	1	4	1							6
2 Air Cav		2	4						6	1	4	1							6
701 Maint	1	3	3	1	2				10	3	3	1		1	1				9
705 Maint	2	3	2	1	2				10	3	3	1		1	1				9
34 Supt ACCB	3	5	6	1					15	5	5	4		1	1				16
313 HHC Bn		1	4	1					6	2	2	1		1					6
522 CEWI		1	4	1					6	2	2	1		1					6
10 Svc Det			2						2	1	1								2
502 HHC		1	1						2	1	1								2
335 Div Spt		1	4						5	2	2	1							5
358 Div Spt		1	4						5	2	2	1							5
337 Div Spt		1	4						5	2	2	1							5

MOS 67N/66N

TOE FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66N E5	PROPOSED TI 66N E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
431 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
237 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
571 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
247 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
15 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
63 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
159 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
236 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
68 Det Air Amb	1	1	8	1	1				12	4	3	3		1	1				12
50 CPS Bn		2	6		1				9	4	2	2			1				9
377 A TA	1	1	4	2					8	2	2	2	1	1					8
2 Cav Spt Air	7	8	7	2	2				26	9	7	6	1	1	1				25
11 Cav Spt Air	7	8	7	2	2				26	9	7	6	1	1	1				25
227 Avn Bn	14	15	56	9	1				95	32	32	21	5	4	3				97
2 Avn	2	1	6	1					10	4	3	2		1	1				11
17 Cav Airmob	18	13	33	7					71	24	22	18	3	4	4				75
194 HHC Bde		1	2	0					3	1	1	1							3
9 Cav	2	3	9	2					16	6	5	3	1	1	1				17
10 Cav	2	3	9	2					16	6	5	3	1	1	1				17
4 Cav	2	3	10	2					17	6	6	3	1	1	1				18
9 Less Trp C	2	3	9	2					16	6	5	3	1	1	1				17
12 Less Trp C	2	3	10	2					17	6	6	3	1	1	1				18
1 Air Cav E	2	3	9	2					16	6	5	3	1	1	1				17
1 Air Cav G	2	3	10	2					17	6	6	3	1	1	1				18

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI 66N E5	TI 66N E6	E6	E7	E8	E9	TOTAL
TOE FORCE																			
269 HHC Bn	1	1							1										
210 HHC Bn	1	1							2										
145 HHC Bn		1	2						2	1	1	1							3
10 HHC Bn	2	1	2						5	1	1	1							3
163d Av Gen Spt	5	6	14	2	1				28	10	9	6	1	1	2				29
118 Aslt Hel Sep	3	12	30	4					49	19	16	10	2	2	2				51
119 Aslt Hel Sep	3	12	30	5					50	19	16	10	3	2	2				52
121 Aslt Hel Sep	3	12	30	5					50	19	16	10	3	2	2				52
129 Aslt Hel Sep	3	12	30	5					50	19	16	10	3	2	2				52
335 Aslt Hel Sep	3	12	30	5					50	19	16	10	3	2	2				52
120 Aslt Hel Sep	8	7	29	5					49	18	16	10	3	2	2				51
117 Aslt Hel Sep	6	9	30	5					50	19	16	10	3	2	2				52
128 Aslt Hel Sep	6	9	30	5					50	19	16	10	3	2	2				52
201 Aslt Hel Sep	7	9	29	5					50	19	16	10	3	2	2				52
48th Aslt Hel Sep	8	7	29	5					49	18	16	10	3	2	2				51
173d Aslt Hel Sep	8	7	29	5					49	18	16	10	3	2	2				51
32d Med Bn	2	3	14	3	1				23	7	6	6	1	2					22
498 Air Amb	7	10	35	6	2				60	20	16	16	2	4	3				61
507 Air Amb	5	10	35	6	3				59	19	16	15	2	4	3				59
421 Air Amb	7	6	31	4					48	16	14	14	2	2	2				50
377 Air Amb	6	6	24	3					39	16	11	9	2	1	2				41
3 HHT	3	2	14	2					21	10	7	6	1	1	1				26
24 Avn Bn	13	16	53	9	1				92	29	31	21	5	4	4				94
56 HHB	1	2	10	1	1				15	5	4	4		1	1				15
36 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
54 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
57 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
82 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11
283 Det Air Amb	1	1	7	1	1				11	3	3	3		1	1				11

MOS 67N/66N

TOE FORCE

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI 66N E5	TI 66N E6	E6	E7	E8	E9	TOTAL
371 Div Spt		1	4						5	2	2	1							5
372 Div Spt		1	4						5	2	2	1							5
374 Div Spt		1	4						5	2	2	1							5
265 Div Spt		1	4						5	2	2	1							5
5 Avn	1	1	4	1					7	3	3	1		1	1				9
1 Avn	1	3	5	1					10	4	4	1		1	1				11
4 Avn	1	3	5	1					10	4	4	1		1	1				11
558 HHD Arty		1	2	1					4	1	1	1		1					4
180 Aslt Spt			1						1		1								1
205 Aslt Spt			1						1		1								1
295 Hvy Hel			1						1		1								1
5 Maint	20	14	22	4					60	26	16	14	2	2	4				64
70 Maint	2	1	7	1	1				12	5	3	2		1	1				12
394 Maint	20	20	30	4	3				77	26	24	20	2	2	3				77
205 Maint	10	11	16	5	2				44	15	12	10	2	3	2				44
568 Maint	3	6	6	2	1				18	5	6	4	1	1	1				18
45 Maint	11	7	13	3	6				40	14	9	8	2	1	2				36
347 Maint	8	7	10	2	4				31	10	8	7	1	1	2				29
507 Maint	8	7	10	2	4				31	10	8	7	1	1	2				29
517 Maint	8	7	10	2	4				31	10	8	7	1	1	2				29
528 Maint	8	7	10	2	4				31	10	8	7	1	1	2				29
590 Maint	8	7	10	2	4				31	10	8	7	1	1	2				29
609 Maint	8	7	10	2	4				31	10	8	7	1	1	2				29
2 Avn Bn	12	17	54	10					93	34	29	21	6	4	4				98
82 Avn Bn	25	26	88	17	3				159	55	49	35	9	8	7				163
7 Avn Bn	14	17	49	9	1				90	32	26	22	4	5	4				93
25 Avn Bn	16	18	53	11	1				99	33	31	23	6	5	5				103
9 Avn Bn	19	19	57	10	1				103	37	35	23	6	4	6				111
114 Aslt Hel	8	6	29	5					48	16	17	10	3	2	2				50
101 Bde HHC	1	1	5	1	1				9	3	2	2		1	1				9
101 Bde HHC	1	1	5	1	1				9	3	2	2		1	1				9
101 Bde HHC	1	1	5	1	1				9	3	2	2		1	1				9
3 Air Cav	5	3	10	1					19	7	5	5		1	1				19

MOS 67N/66N

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI 66N E5	TI 66N E6	E6	E7	E8	E9	TOTAL
TDA FORCE																			
FLD STA AUGSBURG			2	1	1				4	1	1			1					3
FLD STA KOREA		1	3	1					5	2	1	1		1					5
Ft Huachuca		2	2	1					5	2	1	1		1					5
Taiwan				1					1					1					1
Engr Div Pac Ocean		2	2						4	2	1	1							4
HHC 7 TNG CMD			3		1				4	1	1	1							3
AVN SPE/STN			2	1					3	1	1			1					3
SVC Co Berlin		1	5						6	2	2	2		1					7
SF DET Abn EUR				1					1						1				1
RGN SPT EL VI					1				1		1								1
SOTAS			2	1					3	1	1			1					3
SOTAS			2	1					3	1	1			1					3
USAG Ord		1	4	1					6	2	2	1		1					6
USAG Devens		3	2	1					6	2	2	1		1					6
USAG Bragg			4	1					5	2	1	1		1					5
USAG Campbell				1					1					1					1
USAG McPhereson	1	1	5	1					8	2	3	2		1	1				9
USAG Ft S. Houston			3	2	1				6	1	1	1		1					4
USAG Sheridan			3	1					4	1	1	1		1					4
USAG Carson			2	1	2				5	2	1	1		1					5
USAG Drum		2		1					3	1	1			1					3
USAG Presido			3	1	1				5	1	1	1		1					4
Spt Cmd HI		1	6	1					8	2	2	2		1					7
MEDDAC CZ	1	1	4	1	1				8	2	2	2		1					7
Aeromedica			2						2	1	1								2
Avn Spl Elm		2	6	1	1				10	3	3	2		1	1				10
ALM ALFSEE			2	1					3	1	1			1					3
Aero Med Rsch			1						1		1								1
Davison AAF		9	44	3	6				62	21	16	16	2	1	3				59
USA Avn Det JAPAN	2	2	10	2	3				19	6	4	4	1	1	1				17
Mat Spt Cen Ko				1					1					1					1
Avn Bde				1					1										
TC Eustis	1	2	17	3	1				24	8	8	4	1	2	1				24
USAARMC Knox	2	3	3						8	4	2	2			1				9
Ft Lee QMC			3	1					4	1	1	1		1					4

MOS 67N/66N

TDA FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66N E5	PROPOSED TI 66N E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
USAIC	3	3	2	2					10	4	2	2	1	1	1				11
USASC & FG			2		1				3	1	1								2
TC Jackson	1	1	1	1					4	1	1	1		1					4
FA Cen			4						4	2	1	1							4
AD Cen			5	1					6	2	2	1		1					6
USATCE			2						2	1	1								2
Ft Leavenworth			2	1					3	1	1			1					3
ABN BD			1						1		1								1
TC DIX	3	3	2	1	1				10	4	2	2		1	1				10
Intel Sch		1	4						5	2	2	1							5
AVN Bd				2					2				1	1					2
N. Cumberland Dp			1						1		1								1
Corpus Chr			2	1					3		2			1					3
Redstone Ars Spt		1	5	1	1				8	2	2	2		1					7
USAG APG				1					1					1					1
White Sands		1	6		1				8	3	2	2			1				8
Yuma PG		1	9	1					11	4	3	3		1	1				12
Elect PG			2	1					3	1	1			1					3
Cold Test Rgn			6	1					7	2	2	2		1					7
Engr Flt Act			4	1					5	2	1	1		1					5
PM Blackhawk		1	1						2	1	1								2
Rsch Tech Lab			1	1					2		1			1					2
Acft Dev Test			28	5	7				40	11	9	8	3	2	2				35
Troop Spt & Mat				2					2					2					2
AARADCOM SPT			1						1		1								1
FLD SVC ACT				3					3				2	1					3
ERADCOM			2	3					5	1	1		2	1					5
USAPG Dev & Tng	1	1	3	1					6	2	2	1		1					6
Aviation Center	2	5	4	16	83				110	4	4	3	9	7	83				110
Transportation School		1		2	17				20		1			2	16				19

MOS 67T/66T

	CURRENT									PROPOSED									
UNIT	E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	E3	E4	E5	TI 66T E5	TI 66T E6	E6	E7	E8	E9	TOTAL
									TOE FORCE										
101 Aslt Hel	3	6	36	12	15				72	24	18	15	6	6	3				72
158 Aslt Hel	3	6	36	12	15				72	24	18	15	6	6	3				72

MOS 67T/66T

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66T E5	PROPOSED TI 66T E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TDA FORCE																			
PM Blackhawk				1					1					1					1
Acft Dev Test				2					2				1	1					2
Aviation Center				1	3				4					1	1				2
Transportation School		1			13				14		1		3	5	4				13

MOS 67U/66U

TOE FORCE

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI 66U E6	E6	E7	E8	E9	TOTAL
132 Aslt Spt Hel Co	28	13	12	3	16				72	26	25	18	5	5				79
147 Aslt Spt Hel Co	28	13	12	3	16				72	26	25	18	5	5				79
178 Hel Spt Hel Co	28	13	12	3	16				72	26	25	18	5	5				79
179 Aslt Spt Hel Co	28	13	12	3	16				72	26	25	18	5	5				79
243 Aslt Spt Hel Co	28	13	12	3	16				72	26	25	18	5	5				79
196 Aslt Spt Hel Co	28	13	12	3	16				72	26	25	18	5	5				79
242 Aslt Spt Hel Co	17	31	31	3	25				107	38	39	24	7	6				114
213 Aslt Spt Hel Co	28	13	12	3	18				74	26	25	18	5	5				79
271 Aslt Spt Hel Co	28	13	12	3	18				74	26	25	18	5	5				79
352 Det Av Aslt Hel	4	13	12	3	8				40	15	13	9	3	3				43
159 Aslt Hel Bn	93	45	36	9	54				237	90	78	54	15	15				252
34 Supt ACCB	35	22	14	4	17				92	35	32	20	6	6				99
180 Aslt Spt Hel	29	20	6	3	20				78	27	26	18	5	5				81
205 Aslt Spt Hel	29	20	6	3	20				78	27	26	18	5	5				81
295 Hvy Hel	29	20	6	3	20				78	27	26	18	5	5				81
5 Acft Maint & Supply	24	10	8	2					44	18	18	6	4	4				50
568 Acft Maint	2	3	3	1	1				10	4	3	1	1	1				10
45 Acft Maint	5	4	3	2	1				15	6	3	3	1	1				14
347 Acft Maint	7	3	2	2	1				15	6	3	3	1	1				14
507 Acft Maint	7	3	2	2	1				15	6	3	3	1	1				14

MOS 67U/66U

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI 66U E6	E6	E7	E8	E9	TOTAL
TOE FORCE																		
517 Acft Maint	7	3	2	2	1				15	6	3	3	1	1				14
528 Acft Maint	7	3	2	2	1				15	6	3	3	1	1				14
590 Acft Maint	7	3	2	2	1				15	6	3	3	1	1				14
609 Acft Maint	7	3	2	2	1				15	6	3	3	1	1				14

MOS 67U/66U

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL TDA FORCE	PROPOSED E3	E4	E5	TI 66U E6	E6	E7	E8	E9	TOTAL
USAG Carson				1	2				3		1	1	1					3
XVIII Abn Corps					1				1					1				1
TC Eustis	4	2		2	9				17	3	6	5	2	1				17
AVN Bd				1					1				1					1
N. Cumberland Dp				1	2				3			1	1					2
Engr Flt Act		3	1		2				6	2	2	2						6
PM Blackhawk			1		1				2		1							1
Acft Dev Test			17	2	13				32		13	14	2	3				32
FLD SVC Act				2					2				2					2
US Army Aviation Center				3	34				37		16	16	3	4				39
Transportation School	4	2	1	4	44				55	4	2	1	21	27				55

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI 66V E5	TI 66V E6	E6	E7	E8	E9	TOTAL
									MOS 67V/66V TOE FORCE										
25 Corps	1	10	10	4					25	10	6	5	2	2	2				27
62 Corps	1	10	10	4					25	10	6	5	2	2	2				27
18 Corps	3	8	10	3					24	9	6	6	2	1	2				26
55 Army	4	7	8	3					22	8	7	4	2	1	1				23
56 Army	4	7	8	2					21	8	7	4	1	1	1				22
39 Combat		1							1		1								1
36 HHC	1		1						2	1	1								2
937 Gp Combat	1	1	1						3	1	1	1							3
2HHB Div Arty		1	15	2	1				19	6	6	4	1	1	1				19
1HHB Div Arty		1	15	2	1				19	6	6	4	1	1	1				19
4HHB Div Arty		1	15	2	1				19	6	6	4	1	1	1				19
5HHB Div Arty		1	15	2	1				19	6	6	4	1	1	1				19
9HHB Div Arty		1	15	2	1				19	6	6	4	1	1	1				19
2HHC Fwd		1	4	1	1				7	2	2	1		1					6
1HHC Fwd			3	1	1				5	1	1	1		1					4
193HHC Bde		2	2	1	1				6	2	1	1		1					5
197HHC Bde	2	3	3	1	3				12	3	3	2		1					9
222HHC Bn			5	1					6	2	2	1		1					6
7HHC Army			3						3	1	1	1							3
163 Avn Spt	3	6	4						13	5	6	2	1	1	1				16
3HHT Rgt Cav	2	4	2	2					10	3	3	2	1	1					10
3 Air Cav	4	6	5	1					16	6	6	3		1	1				17
24 Avn Bn	10	19	19	6					54	18	19	11	3	3	3				57
56 HHB			3	1	1				5	1	1	1		1					4
40 Const			4		2				6	2	1	1							4
72 HHD			1						1		1								1
50 CPS Abn			1						1		1								1
2 Bde	1	1	2	1					5	2	1	1		1					5
377 A TA		9	8	3	1				21	8	5	4	2	1	1				21
2Cav Spt Air	3	9	8	3	1				24	8	7	5	2	1	1				24
11Cav Spt Air	3	9	8	3	1				24	8	7	5	2	1	1				24
227 Avn Bn	14	30	30	8					82	24	29	21	4	4	5				87
2 Avn	3	3	2	1					9	3	3	2		1					9
17Cav Airmob	6	18	15	3					42	15	15	9		3	3				45
194 HHC Bde	2	2	2	1	1				8	2	2	2		1					7
9 Cav	2	6	4	1					13	5	5	2		1	1				14
10 Cav	2	6	4	1					13	5	5	2		1	1				14

MOS 67V/66V

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66V E5	PROPOSED TI 66V E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TOE FORCE																			
4 Cav	2	6	4	1					13	5	5	2		1	1				14
9 Less Trpc	2	6	4	1					13	5	5	2		1	1				14
12 Less Trpc	2	6	4	1					13	5	5	2		1	1				14
1 Air Cav E	2	6	4	1					13	5	5	2		1	1				14
1 Air Cav G	2	6	4	1					13	5	5	2		1	1				14
155Av Atk Hel		2	11	1					14	5	5	3		1	1				15
6HHT Bde ACCB	1	1	2	1					5	2	1	1		1					5
4 Air Cav Less Trp	4	12	10	2					28	10	10	6		2	2				30
10 Air Cav Less Trp	6	18	15	3					42	15	15	9		3	3				45
5 Air Cav	6	18	15	3					42	15	15	9		3	3				45
9 Cav Air Less Trp	4	12	10	2					28	10	10	6		2	2				30
7 Cav	6	18	15	3					42	12	18	9		3	3				45
17 Air Cav Less Trp	6	18	15	3					42	15	15	9		3	3				45
229 Atk Hel Bn	9	18	24	6					57	24	15	12	3	3	3				60
17 Sq Atk Hel	9	18	24	6					57	24	15	12	3	3	3				60
501 Avn Cbt Bn	13	32	28	9	2				84	31	25	17	5	4	5				87
3 Avn Cbt Bn	13	32	28	9	2				84	31	25	17	5	4	5				87
503 Avn Cbt Bn	13	32	28	9	2				84	31	25	17	5	4	5				87
8 Avn Cbt Bn	13	32	28	9	2				84	31	25	17	5	4	5				87
11 Air Cav	3	7	7	2					19	6	6	5	1	1	1				20
2 Air Cav	3	7	7	2					19	6	6	5	1	1	1				20
89 HHC GP MP	1	2	2	1					6	2	2	1		1					6
16 HHC GP MP	1	2	2	1					6	2	2	1		1					6
701 Maint	2	6	6	1					15	4	6	4		1	1				16
705 Maint	5	4	5	1					15	4	6	4		1	1				16
34 Supt ACCB	3	5	6	1					15	5	5	4		1	1				16
64 Support		2	1		1				4	1	1	1							3
7 Svc	1	2	1		1				5	2	1	1		1					5

MOS 67V/66V

	CURRENT									PROPOSED									
UNIT	E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	E3	E4	E5	TI 66V E5	TI 66V E6	E6	E7	E8	E9	TOTAL
									TOE FORCE										
10 Svc	1	2	1		1				5	2	1	1		1					5
5 Svc	1	2	1		1				5	2	1	1		1					5
4 Bde	1	1	2						4	2	1	1							4
1 HHC Bde	1	1	2	1					5	2	1	1		1					5
1 HHC Bde	1	1	2	1					5	2	1	1		1					5
4 HHC Bde	1	1	2	1					5	2	1	1		1					5
4 HHC Bde	1	1	2	1					5	2	1	1		1					5
4 HHC Bde	1	1	2	1					5	2	1	1		1					5
5 HHC Bde	1	1	2	1					5	2	1	1		1					5
5 HHC Bde	1	1	2	1					5	2	1	1		1					5
5 Avn	1	3	2	1	1				8	2	2	2		1					7
1 Avn	2		6	1	1				10	3	3	2		1					9
4 Avn	2		6	1	1				10	3	3	2		1					9
5 Maint	4	10	8	2					24	10	6	6		2	2				26
70 Maint		2	1						3	1	1	1							3
394 Maint	5	12	12	3	1				33	8	13	8	2	1	2				34
205 Maint	5	10	11	4	1				31	8	11	7	2	2	2				32
568 Maint		2	1						3	1	1	1							3
45 Maint	1	3	2	2					8	2	2	2	1	1					8
347 Maint	1	3	2	1					7	2	2	2		1					7
507 Maint	1	3	2	1					7	2	2	2		1					7
517 Maint	1	3	2	1					7	2	2	2		1					7
528 Maint	1	3	2	1					7	2	2	2		1					7
590 Maint	1	3	2	1					7	2	2	2		1					7
609 Maint	1	3	2	1					7	2	2	2		1					7
2 Avn Bn	7	20	17	7					51	18	15	11	4	3	3				54
82 Avn Bn	12	23	22	8	1				66	18	24	15	4	4	4				69
7 Avn Bn	6	14	12	5	2				39	12	11	9	3	2	2				39
25 Avn Bn	7	14	12	4	1				38	12	12	9	2	2	2				39
9 Avn Bn	13	22	17	7	1				60	21	18	13	4	3	3				52
101 Bde HHC	1	3	3	1	2				10	2	3	2		1					8
101 Bde HHC	1	3	3	1	2				10	2	3	2		1					8
101 Bde HHC	1	3	3	1	2				10	2	3	2		1					8

MOS 67V/66V

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI 66V E5	TI 66V E6	E6	E7	E8	E9	TOTAL
									TDA FORCE										
AVN SFE/STN			1						1		1								1
USAG Ord			2						2	1	1								2
USAG Carson			1						1		1								1
Aero Med Rsch		1							1		1								1
TC Eustis	1	3		2					6	1	3			2					6
USAARMC Knox	2	2	3	1					8	3	2	2		1					8
FA Cen	1	1	2	1					5	2	1	1		1					5
AD Cen		1	2						3	1	2								3
White Sands		1	12	1	1				15	4	5	4		1	1				15
PM Blackhawk			1						1		1								1
Acft Dev Test			1		1				2		1			1					2
Fld Svc Act				2					2				1	1					2
Aviation Ctr	2	4		10	16				32	3	3		6	4	16				32
Transportation Ctr				2	6				8					2	6				8

MOS 67X/66X

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI 66X E6	E6	E7	E8	E9	TOTAL
TDA FORCE																		
AVN Bde				1					1									
Trans School					6				6					4				4

MOS 67Y/66Y

TOE FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66Y E5	PROPOSED TI 66Y E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	TOTAL
101 HHC Gp Cbt				1					1					1					1
118 Aslt Hel		4	9	2					15	5	5	3	1	1	1				16
3 Air Cav	8	6	7	2					23	7	10	4	1	1	2				25
24 Avn Bn	17	14	23	5	1				60	22	21	11	2	3	3				62
227 Avn Bn	17	14	23	5	1				60	22	19	13	2	3	4				63
17 Cav Airmob	18	15	21	6					60	18	24	12	3	3	3				63
9 Cav	6	5	7	2					20	7	6	5	1	1	1				21
10 Cav	6	5	7	2					20	7	6	5	1	1	1				21
4 Cav	6	5	7	2					20	7	6	5	1	1	1				21
9 Less Trp C	6	5	7	2					20	7	6	5	1	1	1				21
12 Less TrpC	6	5	7	2					20	7	6	5	1	1	1				21
1 Air Cav E	6	5	7	2					20	7	6	5	1	1	1				21
1 Air Cav G	6	5	7	2					20	7	6	5	1	1	1				21
155 Av Atk Hel	3	4	16	1	1				25	10	6	7		1	2				26
4 Air Cav Less Trp	12	12	14	4					42	12	18	8	2	2	2				44
10 Air Cav Less Trp	18	18	21	6					63	18	27	12	3	3	3				66
5 Air Cav	18	18	21	6					63	18	27	12	3	3	3				66
9 Cav Air Less Trp	12	12	14	4					42	12	18	8	2	2	2				42
7 Cav	15	18	21	6					60	18	24	12	3	3	3				63
17 Air Cav Less Trp	18	18	21	6					60	18	27	12	3	3	3				66
229 Atk Hel Bn	36	30	54	9					129	48	48	24	3	6	9				138
17 Sq Atk Hel	39	30	54	9					132	51	48	24	3	6	9				141
501 Avn Cbt Bn	30	30	37	8					105	42	32	23	3	5	7				112
3d Avn Cbt Bn	30	30	37	8					105	42	32	23	3	5	7				112
503 Avn Cbt Bn	30	30	37	8					105	42	32	23	3	5	7				112
8 Avn Cbt Bn	30	30	37	8					105	42	32	23	3	5	7				112

MOS 67Y/66Y

	CURRENT									PROPOSED									
UNIT	E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	E3	E4	E5	TI 66Y E5	TI 66Y E6	E6	E7	E8	E9	TOTAL
									TOE FORCE										
11 Air Cav Bn	13	10	18	3					44	17	14	10	1	2	3				47
2 Air Cav Bn	13	10	18	3					44	17	14	10	1	2	3				47
701 Maint			2						2		2								2
705 Maint	1	1							2		2								2
34 Supt ACCB	4	6	8	2	3				23	5	9	4	1	1	1				21
5 Maint	6	8	10	2					26	6	12	6		2	2				28
70 Maint			3						3	1	1	1							3
394 Maint	9	8	11	4	1				33	12	8	8	1	3	2				34
205 Maint	4	9	9	3	1				26	10	6	6	1	2	2				27
568 Maint		2	2						4	1	2	1							4
45 Maint	3	2	4	2					11	3	3	3	1	1	1				12
347 Maint	3	2	4	2					11	3	3	3	1	1	1				12
507 Maint	3	2	4	2					11	3	3	3	1	1	1				12
517 Maint	3	2	4	2					11	3	3	3	1	1	1				12
528 Maint	3	2	4	2					11	3	3	3	1	1	1				12
590 Maint	3	2	4	2					11	3	3	3	1	1	1				12
609 Maint	3	2	4	2					11	3	3	3	1	1	1				12
2 Avn Bn	1	4	4	1	3				13	3	3	3		1	1				11
82 Avn Bn	17	14	22	4	1				58	20	20	13	1	3	4				61
7 Avn Bn	3	3	4	1	1				12	4	4	2		1	1				12
25 Avn Bn	4	4	4	1	1				14	3	6	3		1	1				14
9 Avn Bn	4	4	4	1	1				14	3	6	3		1	1				14

MOS 67Y/66Y

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED TI 66Y E5	PROPOSED TI 66Y E6	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	TOTAL
									TDA FORCE										
USAG Campbell				1					1					1					1
USAG Carson			1	1					2		1			1					2
TC Eustis	1	2	2		1				6	2	2	1							5
USAARMC Knox	1	1							2	1		1							2
AVN Bd					1				1						1				1
Corpus Chr			1	1					2		1			1					2
Redstone Ars Spt		1	6	1	1				9	3	2	2		1					8
Yuma PG		1	5						6	2	2	2							6
PM Cobra				1					1					1					1
Acft Dev Test			2		1				3	1	1			1					3
Troop Spt & Mat				1					1					1					1
AARADCOM SPT			1						1		1								1
FLD/SVC ACT				2					2				1	1					2
USAPG Dev & Tng	2	3	5	1					11	4	4	2		1	1				12
Aviation Center				4	2				6				2	2	2				6
Transportation School	3	4	2	7	38				54	3	5	1	2	5	38				54

	CURRENT							MOS 67Z	PROPOSED							
UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
								TOE FORCE								
25 Corps					4	1		5					3	1		4
62 Corps					4	1		5					3	1		4
207 Army					3	1		4						1		1
18 Corps					3	1		4					3	1		4
55 Army					3	1		4					3	1		4
56 Army					3	1		4					3	1		4
132 Aslt Spt Hel					7	1		8					4	1		5
147 Aslt Spt Hel					7	1		8					4	1		5
178 Aslt Spt Hel					7	1		8					4	1		5
179 Aslt Spt Hel					7	1		8					4	1		5
243 Aslt Spt Hel					7	1		8					4	1		5
196 Aslt Spt Hel					6	1		7					4	1		5
242 Aslt Spt Hel					7	1		8					5	1		6
213 Aslt Spt Hel					4	1		5					4	1		5
271 Aslt Spt Hel					4	1		5					4	1		5
352 Av Det Aslt Hel					3	1		4					2	1		3
1 Avn Spt					1			1								
6 Avn Svc					1			1								
22 Avn Spt					1			1								
357 Avn Spt					1			1								
2 Avn Spt					1			1								
2 HHB					1			1					1			1
1 HHB					1			1					1			1
4 HHB					1			1					1			1
5 HHB					1			1					1			1
9 HHB					1			1					1			1
1 HHC Fwd					1			1								
193d HHC Bde					1			1								
197 HHC Bde													1			1
101 HHC GP Cbt					1	2		3						1	1	2
159 Aslt Hel Bn					21	4		25					15	4		19
72 Air Traffic					1			1								
17 HHC GP						1		1						1	1	2
11 HHC GP						2		2						1	1	2
12 HHC GP						2		2						1	1	2
222 HHC Bn					5	1		6					4	1		5
52 HHC, Bn					4			4					2	1		3
19 HHC Bn					3			3					2	1		3

MOS 67Z

	CURRENT								PROPOSED							
UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
223 HHC Bn					4			4					2	1		3
11 HHC Bn					3			3					2			2
14 HHC Bn					4			4					2	1		3
269 HHC Bn					4			4					2	1		3
210 HHC Bn					4			4					2	1		3
145 HHC Bn					4	1		5					2	1		3
10 HHC Bn					4	1		5					2	1		3
163 Avn Gen Spt					4	1		5					3	1		4
158 Aslt Hel Bn					19	4		23					11	4		15
101st Aslt Hel Bn					19	4		23					11	4		15
118 Aslt Hel Sep					6	1		7					4	1		5
119 Aslt Hel Sep					5	1		6					3	1		4
121 Aslt Hel Sep					5	1		6					3	1		4
129 Aslt Hel Sep					5	1		6					3	1		4
335 Aslt Hel Sep					5	1		6					3	1		4
120 Aslt Hel Sep					5	1		6					3	1		4
117 Aslt Hel Sep					5	1		6					3	1		4
128 Aslt Hel Sep					5	1		6					3	1		4
201 Aslt Hel Sep					4	1		5					3	1		4
48 Av Aslt Hel Sep					4	1		5					3	1		4
173d Av Aslt Hel Sep					4	1		5					3	1		4
326 Med Bn					1			1					1			1
498 Air Amb					3			3					1			1
507 Air Amb					3			3					1			1
421 Air Amb					3			3					1			1
377 Air Amb					3			3					1			1
3 HHT					2			2					2			2
3 Air Cav					3			3					3			3
24 Avn Bn					19	4		23					15	4		19
56 HHB					1			1								
377 A TA					1	1		2					1	1		2
7 HHC					1			1					1			1
2 Cav Spt Air					4	1		5					3	1		4
11 Cav Spt Air					4	1		5					3	1		4
227 Avn Bn					19	4		23					15	4		19
2 Avn					3	1		4					2	1		3
17 Cav Airmob					10			10					9			9
194 HHC Bde					1			1								

MOS 677

TOE FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
9 Cav					4			4					3			3
10 Cav					4			4					3			3
4 Cav					4			4					3			3
9 Less Trp C					4			4					3			3
12 Less Trp C					4			4					3			3
1 Air Cav E					4			4					3			3
1 Air Cav G					4			4					3			3
155 Av Atk Hel					7	1		8					4	1		5
6 HHT Bde ACCB					1			1					1		1	2
4 Air Cav Less Trp					7			7					6			6
10 Air Cav Less Trp					10			10					9			9
5 Air Cav					10			10					9			9
9 Air Cav Less Trp					7			7					6			6
7 Cav					10			10					9			9
17 Air Cav Less Trp					10			10					9			9
229 Atk Hel Bn					24	3		27					17	3		20
17 Sq Atk Hel					24	3		27					17	3		20
503 Avn Cbt Bn					25	5		30					17	6		23
8 Avn Cbt Bn					25	5		30					17	6		23
501 Avn Cbt Bn					29	6		35					20	7		27
3 Avn Cbt Bn					29	6		35					20	7		27
11 Air Cav					7	1		8					5	1		6
2 Air Cav					7	1		8					5	1		6
1 Mat Mgt					1			1					1			1
3 Mat Mgt					1			1					1			1
3 Mat Mgt					1			1					1			1
8 Mat Mgt					1			1					1			1
2 Mat Mgt					1			1					1			1
4 Mat Mgt					1			1					1			1
1 Mat Mgt					1			1					1			1
1 Mat Mgt					1			1					1			1
2 Mat Mgt					1			1					1			1
25 Mat Mgt					1			1					1			1
9 Mat Mgt					1			1					1			1
5 Mat Mgt					1			1					1			1
7 Mat Mgt					1			1					1			1
24 Mat Mgt					1			1					1			1
707 Maint					1			1					1			1

MOS 67Z

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TOE FORCE																
725 Maint					1			1					1			1
702 Maint					1			1					1			1
709 Maint					1			1					1			1
704 Maint					1			1					1			1
701 Maint					2	1		3					2	2		4
705 Maint					3	1		4					3	2		5
101 Mat Mgt					1	1		2					1	1		2
182 Mat Mgt					1			1					1			1
34 Supt ACCB					15	3		18					7	3		10
48 Area Maint DS					1			1								
588 Area Maint DS					1			1								
14 Lt Maint DS					1			1								
11 Tech Intel					2			2					2			2
73 Aer Surv					1	1		2						1		1
2 Air Rcn					7	1		8						1		1
15 AE					5			5								
172 Det AS					1			1								
10 Svc Det 1					1			1								
7 Svc Det 1					1			1								
5 Svc Det 1					1			1								
10 Svc Det 1					1			1								
1 Avn Guardrail					1			1								
146 Avn Fwd					3			3								
330 Avn Fwd					2			2								
5 Avn					2	1		3					2	1		3
1 Avn					2	1		3					2	1		3
4 Avn					2	1		3					2	1		3
1 COSCOM						1		1						1		1
13 Corps Spt Com						1		1						1		1
3 HHC Spt Corps						1		1						1		1
2 HHC Corps Spt						1		1						1		1
2 Mat Mgt FORSCOM					1			1					1			1
4 Mat Mgt COSCOM					1			1					1			1
9 Maj Mgt Spt						1		1					1			1
800 Maint Mgt					1			1					1			1
19 Maint Mgt					2	1		3					1			1
19 HHC Spt						1		1					1			1
6 Maint Mgt Spt					1			1					1			1

MOS 67Z

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
200 Maint Mgt Spt					2	1		3					1			1
593 HHC Gp Spt					1			1								
180 Ast Spt Hel					5	1		6					4	1		5
205 Aslt Spt Hel					5	1		6					4	1		5
295 Hvy Hel					5	1		6					4	1		5
5 Maint					21	3		24					9	5		14
70 Maint					9	3		12					4	3		7
394 Maint					14	4		18					7	4		11
205 Maint					13	4		17					6	4		10
568 Maint					7	1		8					2	2		4
45 Maint					9	1		10					4	2		6
347 Maint					10	1		11					4	2		6
507 Maint					10	1		11					4	2		6
517 Maint					10	1		11					4	2		6
528 Maint					10	1		11					4	2		6
590 Maint					10	1		11					4	2		6
609 Maint					10	1		11					4	2		6
2 Avn Bn					14	4		18					10	5		15
82 Avn Bn					24	6		30					18	7		25
7 Avn Bn					13	4		17					10	5		15
25 Avn Bn					13	4		17					10	5		15
9 Avn Bn					15	4		19					10	5		15
114 Aslt Hel					4	1		5					3	1		4
101 Bde HHC					1			1					1			1
101 Bde HHC					1			1					1			1
101 Bde HHC					1			1					1			1
1 Air Recon					1			1								

MOS 67Z

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TDA FORCE																
USA Fld Sta SINOP					1			1								
USA Fld Sta KOREA					1			1								
HQ Ft. Huachuca					1			1								
Engr Div Pac Ocean					1			1								
Engr Eur					1			1								
Engr Div Middl					1			1								
Svc Co Berlin					1			1								
IN Bde Alaska					2			2					1	1		2
Hq 1 Army					1			1						1		1
Hq 5 Army					3	2		5					1	3		4
Hq 6 Army					1			1						1		1
USAG Ord					1			1								
USAG Devens					1			1								
USAG Bragg					1	1		2						1		
USAG Campbell					3	1		4					1			1
USAG McPherson					1			1								
USAG Stewart					1			1					1			1
USAG Texas					2			2					1			1
USAG Ft S Houston					2			2								
USAG Polk					1			1								
USAG Sheridan					1			1								
USAG Carson					1			1					1			1
USAG Presido					1			1								
USAG Lewis					1			1								
SPT Cmd HI					1			1								
Hq FORSCOM					2			2						1	1	2
RGN 1						11		11						10	1	11
RGN 2						9		9						8	1	9
RGN 3					7	5		12					6	5	1	12
RGN 4					1	20		21						20	1	21
RGN 5					2	10		12					1	10	1	12
RGN 6					3	10		13					2	10	1	13
RGN 7					4	10		14					3	10	1	14
RGN 8					1	10		11						10	1	11
RGN 9						7		7						6	1	7
USA JUSMMAT TU					1	1		2								
AVN SPT ELM					1	1		2								
USA ELM ALFSEE					1			1								

MOS 67Z

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TDA FORCE																
MILPERCEN					1	1		2					1	1		2
Davison AAF					4	4		8					3	2		5
USA Avn Det JAPAN					1	1		2						1		1
CS BN					1			1								
USA Agcy for Avn Sfty					9	2		11					5	1	1	7
Avn Bde					25	9		34					25	9		34
TC Eustis					4	1		5					2	1		3
USAG Monroe						1		1								
USAARMC Knox					2			2					1			1
Ft Lee QMC					1			1								
USAIC					1			1								
TC Jackson					1			1								
FA Cen					3			3								
AD Cen					2			2					1			1
USATCE					1			1								
ABN BD					1			1								
TC DIX					1			1								
INTEL SCH					1	1		2								
TRADOC Comb Arms Tm					1			1					1			1
AVN Bd					3	1	1	5					1	1	1	3
N. Cumberland Dp					2			2					2			2
Corpus Chr					4	1	1	6					1	1	1	3
Redstone Ars Spt					2			2					1			1
White Sands					1	1		2					1			1
Yuma PG					2			2					1			1
Elect PG					1			1								
Cold Test Rgn					1			1								
Engr Flt Act					2			2					1			1
PM Blackhawk					1			1					1			1
RSCH Tech LAB					1			1					1			1
PM Cobra					1			1					1			1
Dugway PG					1			1								
Acft Dev Test					16	3	1	20					7	2	1	10
PM Spec Elec					3			3					1			1
Troop Spt & Mat					3	1		4					2		1	3
AARAD COM					1			1								
Msl Readiness					2			2					1			1
FLD Svc Act					3		5	8					2	1	5	8

MOS 67Z

TDA FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
USAPG Dev & Tng					3			3					1			1
Aviation Center					62	7	1	70					59	7	1	67
Transportation School					106	32	9	147					74	32	9	115

MOS 68B

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TOE FORCE																
25 Corps	1	1	1					3	1	1	1					3
62 Corps	1	1	1					3	1	1	1					3
18 Corps	1	1						2	1	1						2
55 Army	1	1						2	1	1						2
56 Army	1	1						2	1	1						2
132 Aslt Spt Hel		2	1	1				4	1	1	1					3
147 Aslt Spt Hel		2	1	1				4	1	1	1					3
178 Aslt Spt Hel		2	1	1				4	1	1	1					3
179 Aslt Spt Hel		2	1	1				4	1	1	1					3
243 Aslt Spt Hel		2	1	1				4	1	1	1					3
196 Aslt Spt Hel		2	1	1				4	1	1	1					3
242 Aslt Spt Hel	1	2	2					5	2	1	2					5
213 Aslt Spt Hel		2	1	1				4	1	1	1					3
271 Aslt Spt Hel		2	1	1				4	1	1	1					3
352 Det Aslt Hel			1					1		1						1
6 Avn Svc			1					1		1						1
2 HHB Div Arty		1						1		1						1
1 HHB Div Arty		1						1		1						1
4 HHB Div Arty		1						1		1						1
5 HHB Div Arty		1						1		1						1
9 HHB Div Arty		1						1		1						1
197 HHC Bde		1						1		1						1
159 Aslt	3	3	3					9	3	3	3					9
222 HHC Bn	2	1						3	1	1	1					3
163 Avn Gen Spt	1	1						2	1	1						2
101 Aslt Hel Bn		6						6	3	3						6
158 Aslt Hel Bn		6						6	3	3						6
118 Aslt Hel Sep		1	1					2	1	1						2
119 Aslt Hel Sep		1	1					2	1	1						2
121 Aslt Hel Sep		1	1					2	1	1						2
129 Aslt Hel Sep		1	1					2	1	1						2
335 Aslt Hel Sep		1	1					2	1	1						2
120 Aslt Hel Sep		1						1		1						1
117 Aslt Hel Sep	2	1						3	1	1	1					3
201 Aslt Hel Sep	1	1						2	1	1						2
48 Av Aslt Hel Sep		1						1		1						1
173 Av Aslt Hel Sep		1						1		1						1

	CURRENT							MOS 68B	PROPOSED							
UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
								TOE FORCE								
326 Med Bn		1						1		1						1
498 Air Amb	1	1						2	1	1						2
507 Air Amb	1	1						2	1	1						2
421 Air Amb	1	1						2	1	1						2
377 Air Amb	1	1						2	1	1						2
3 HHT Rgt Cav		1						1		1						1
3 Air Cav	1							1		1						1
24 Avn Bn	6	4	2	1				13	5	5	2					12
377 A TA		1						1		1						1
2 Cav Spt Air	1	1						2	1	1						2
11 Cav Spt Air	1	1						2	1	1						2
227 Avn Bn	6	4	2	2				14	5	5	2					12
17 Cav Airmob	3	3						6	3	3						6
9 Cav	1	1						2	1	1						2
10 Cav	1	1						2	1	1						2
4 Cav	1	1						2	1	1						2
9 Less Trp C	1	1						2	1	1						2
12 Less TrpC	1	1						2	1	1						2
1 Air Cav E	1	1						2	1	1						2
1 Air Cav G	1	1						2	1	1						2
155 Av Atk Hel	1	2	1					4	2	1	1					4
4 Air Cav Less Trp	2							2		2						2
10 Air Cav Less Trp	3							3		3						3
5 Air Cav	3							3		3						3
9 Cav Air Less Trp	2							2		2						2
7 Cav	6		3					9	3	3	3					9
17 Air Cav Less Trp	3	3						6	3	3						6
229 Atk Hel Bn	3	3						6	3	3						6

MOS 68B

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
17 Sq Atk Hel	3	3						6	3	3						6
503 Avn Cbt Bn	8	5	2	1				16	6	5	4					15
8 Avn Cbt Bn	8	5	2	1				16	6	5	4					15
501 Avn Cbt Bn	9	6	2	1				18	7	6	4					17
3 Avn Cbt Bn	9	6	2	1				18	7	6	4					17
11 Air Cav	2	1						3	1	1	1					3
2 Air Cav	2	1						3	1	1	1					3
701 Maint		3						3	1	1	1					3
705 Maint	2	1						3	1	1	1					3
34 Supt ACCB	7	2	5	1				15	5	4	5					14
73 Aer Surv		2	1	1				4	1	1	1					3
2 Air Recon	4	2	2	1				9	3	3	2					8
15 AE	3	1	1					5	2	1	2					5
172 Det AS	2	1						3	1	1	1					3
1 Avn Guardrail	2	1						3	1	1	1					3
146 Avn Fwd	4	2						6	2	2	2					6
330 Avn Fwd		1	1					2	1	1						2
180 Aslt Spt	1	1	2	1				5	2	1	1					4
205 Aslt Spt	1	1	2	1				5	2	1	1					4
295 Hvy Hel	1	1	2	1				5	2	1	1					4
5 Maint	10	6	6	2				24	8	6	8					22
70 Maint			1	1				2		1						1
394 Maint	8	5	6	1				20	7	5	7					19
205 Maint	15	10	10	1				36	13	9	13					35
568 Maint	2	5	4	2				13	4	3	4					11
45 Maint	7	6	6	1				20	7	5	7					19
347 Maint	12	7	9	1				29	11	7	10					28
507 Maint	12	7	9	1				29	11	7	10					28
517 Maint	12	7	9	1				29	11	7	10					28
528 Maint	12	7	9	1				29	11	7	10					28
590 Maint	12	7	9	1				29	11	7	10					28

MOS 68B

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL (TOE FORCE)	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
609 Maint	12	7	9	1				29	11	7	10					28
2 Avn Bn	4	4	3	1				12	4	4	3					11
82 Avn Bn	7	6	3	1				17	7	6	3					16
7 Avn Bn	4	4	2	1				11	4	4	2					10
25 Avn Bn	5	4	3	1				13	5	4	3					12
9 Avn Bn	4	4	3	1				12	4	4	3					11
114 Aslt Hel	1	1						2	1	1						2
101 Bde HHC		1						1		1						1
101 Bde HHC		1						1		1						1
101 Bde HHC		1						1		1						1

MOS 68B

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
								TDA FORCE								
USAG Carson			2					2	1	1						2
USA Avn Det Japan			1					1		1						1
USAARMC Knox		1						1		1						1
USAIC		1						1		1						1
TC Dix		1						1		1						1
Redstone Ars Spt		1	1					2	1	1						2
Yuma PG		1						1		1						1
Acft Dev Test			2					2	1	1						2
Troop Spt & Mat			1	1				2		1						1
USAPG Dev & Tng		1						1		1						1
Aviation Center	2	1		2				5	1	1	1					3
Transportation School	1	2		18				21	1	2						3

MOS 68D

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED (TOE FORCE) E3	E4	E5	E6	E7	E8	E9	TOTAL
25 Corps	1			1				2		1						1
62 Corps	1			1				2		1						1
18 Corps	1	1						2	1		1					2
55 Army	1	1						2	1		1					2
56 Army	1	1						2	1		1					2
132 Aslt Spt	2	2	1					5	2	2	1					5
147 Aslt Spt	2	2	1					5	2	2	1					5
178 Aslt Spt	2	2	1					5	2	2	1					5
179 Aslt Spt	2	2	1					5	2	2	1					5
243 Aslt Spt	2	2	1					5	2	2	1					5
196 Aslt Spt	2	2	1					5	2	2	1					5
242 Aslt Spt		2	2					4	2	1	1					4
213 Aslt Spt	2	2	1					5	2	2	1					5
271 Aslt Spt	2	2	1					5	2	2	1					5
352 Det Aslt		1	1					2	1		1					2
2 HHB Div		1						1		1						1
1 HHB Div		1						1		1						1
4 HHB Div		1						1		1						1
5 HHB Div		1						1		1						1
9 HHB Div		1						1		1						1
197 HHC Bde	1							1		1						1
159 Aslt Spt	6	6	3					15	6	6	3					15
222 HHC Bn		1						1		1						1
163 Av Gen Spt	1							1		1						1
101st Aslt Hel Bn	3							3		3						3
158 Aslt Hel Bn	3							3		3						3
118 Aslt Hel Sep		1						1		1						1
119 Aslt Hel Sep		1						1		1						1
121 Aslt Hel Sep		1						1		1						1
129 Aslt Hel Sep		1						1		1						1
335 Aslt Hel Sep		1						1		1						1
120 Aslt Hel Sep	1	1						2	1		1					2
117 Ast Hel Sep		1						1		1						1
128 Ast Hel Sep		1						1		1						1
201 Aslt Hel Sep	1	1						2	1		1					2
48 Av Aslt Hel Sep	1	1						2	1		1					2

	CURRENT							MOS 68D	PROPOSED							
UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
								TOE FORCE								
173 Av Aslt Hel Sep	1	1						2	1		1					2
326 Med Bn	1							1		1						1
498 Air Amb	1							1		1						1
507 Air Amb	1							1		1						1
421 Air Amb	1							1		1						1
377 Air Amb	1							1		1						1
3 HHT Rgt Cav	1	1						2	1		1					2
3 Air Cav	2							2	1		1					2
24 Avn Bn	6	4	1	1				12	5	3	3					11
377 A TA	1							1		1						1
2 Cav Spt Air	1	1						2	1		1					2
11 Cav Spt Air	1	1						2	1		1					2
227 Avn Bn	6	3	1	1				11	4	4	2					10
17 Cav Airmob	3	3						6	3		3					6
9 Cav	1							1		1						1
10 Cav	1							1		1						1
4 Cav	1							1		1						1
9 Less Trp C	1							1		1						1
12 Less TrpC	1							1		1						1
1 Air Cav E	1							1		1						1
1 Air Cav G	1							1		1						1
155 Av Atk Hel		1						1		1						1
4 Air Cav Less Trp	4							4	2		2					4
10 Air Cav Less Trp	6							6	3		3					6
5 Air Cav	6							6	3		3					6
9 Cav Air Less Trp	4							4	2		2					4
7 Cav	6		3					9	3	3	3					9
17 Air Cav Less Trp	3							3		3						3
229 Atk Hel Bn	3							3		3						3

	CURRENT							MOS 68D	PROPOSED									
UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	TI E5	TI E6	E6	E7	E8	E9	TOTAL
								TOE FORCE										
17 Sq Atk Hel	3							3		3								3
503 Avn Cbt Bn	5	3	1					9	3	4	2							9
8 Avn Cbt Bn	5	3	1					9	3	4	2							9
501 Avn Cbt Bn	6	4	1					11	4	4	3							11
3 Avn Cbt Bn	6	4	1					11	4	4	3							11
11 Air Cav	1	1						2	1		1							2
2 Air Cav	1	1						2	1		1							2
701 Maint		1	1					2	1		1							2
705 Maint	1							1		1								1
34 Supt ACCB	3	4	3					10	4	4	2							10
5 Maint	6	4	2					12	6	4	2							12
394 Maint	14	8	6	2				30	11	10	7							28
205 Maint	11	8	5	1				25	9	9	6							24
568 Maint		1	1					2	1		1							2
45 Maint	5	5	3					13	5	5	3							13
347 Maint	2	2	1					5	2	2	1							5
507 Maint	2	2	1					5	2	2	1							5
517 Maint	2	2	1					5	2	2	1							5
528 Maint	2	2	1					5	2	2	1							5
590 Maint	2	2	1					5	2	2	1							5
609 Maint	2	2	1					5	2	2	1							5
2 Avn Bn	4	4	1					9	4	2	3							9
82 Avn Bn	7	5	2					14	6	3	5							14
7 Avn Bn	4	4	2					10	5	2	3							10
25 Avn Bn	5	4	2					11	5	2	4							11
9 Avn Bn	5	4	2					11	5	2	4							11
114 Aslt Hel	1	1						2	1		1							2
101 Bde HHC	1							1		1								1
101 Bde HHC	1							1		1								1
101 Bde HHC	1							1		1								1

MOS 68D

TDA FORCE

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
USAG Ord	1							1		1						1
USAG Carson			3					3	1	1	1					3
USA Avn Det Japan			1					1		1						1
TC Eustis	1	2						3	1	1	1					3
Yuma PG		2						2	1		1					2
Acft Dev Test			2					2	1		1					2
Aviation Center				1				1								
Transportation School		1		13				14		1						1

MOS 68F

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
25 Corps	1	1						2	1		1					2
62 Corps	1	1						2	1		1					2
207 Army			1					1		1						1
18 Corps	1							1		1						1
55 Army	1							1		1						1
56 Army	1							1		1						1
132 Aslt Spt Hel	2	1	2					5	3	1	1	1				6
147 Aslt Spt Hel	2	1	2					5	3	1	1	1				6
178 Aslt Spt Hel	2	1	2					5	3	1	1	1				6
179 Aslt Spt Hel	2	1	2					5	3	1	1	1				6
243 Aslt Spt Hel	2	1	2					5	3	1	1	1				6
196 Aslt Spt Hel	2	1	2					5	3	1	1	1				6
242 Aslt Spt Hel		2	1					3	2		1					3
213 Aslt Spt Hel	2	1	2					5	3	1	1	1				6
271 Ast Spt Hel	2	1	2					5	3	1	1	1				6
352 Det Aslt			2					2	1		1					2
2 HHB Div Arty		1						1		1						1
1 HHB Div Arty		1						1		1						1
4 HHB Div Arty		1						1		1						1
5 HHB Div Arty		1						1		1						1
9 HHB Div Arty		1						1		1						1
197 Bde	1							1		1						1
159 Aslt Spt Hel	3	3	6					12	9		3					12
222 HHC Bn			2					2	1		1					2
163 Av Gen Spt	1							1		1						1
101 Aslt Hel Bn	3							3		3						3

MOS 68F

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TOE FORCE																
158 Aslt Hel Bn	3							3		3						3
118 Aslt Hel Sep		1						1		1						1
119 Aslt Hel Sep		1						1		1						1
121 Aslt Hel Sep		1						1		1						1
129 Aslt Hel Sep		1						1		1						1
335 Aslt Hel Sep		1						1		1						1
120 Aslt Hel Sep	1							1		1						1
117 Aslt Hel Sep	1							1		1						1
128 Aslt Hel Sep	1							1		1						1
201 Aslt Hel	1							1		1						1
48 Av Aslt Hel Sep	1							1		1						1
173d Av Aslt Hel Sep	1							1		1						1
326 Med Bn	1							1		1						1
498 Air Amb	1							1		1						1
507 Air Amb	1							1		1						1
421 Air Amb	1							1		1						1
377 Air Amb	1							1		1						1
3 HHT Rgt Cav	1							1		1						1
3 Air Cav	1							1		1						1
24 Avn Bn	3	2	1					6	2	2	2					6
377A TA		1						1		1						1
2 Cav Spt Air	1							1		1						1
11 Cav Spt Air	1							1		1						1
227 Avn Bn	3	1	1					5	1	3	1					5
17 Cav Airmob	3							3		3						3
9 Cav	1							1		1						1
10 Cav	1							1		1						1

MOS 68F

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
4 Cav	1							1		1						1
9 Less Trp C	1							1		1						1
12 Less TrpC	1							1		1						1
1 Air Cav E	1							1		1						1
1 Air Cav G	1							1		1						1
155 Av Atk Hel			1					1		1						1
4 Air Cav Less Trp	2							2		2						2
10 Air Cav Less Trp	3							3		3						3
5 Air Cav	3							3		3						3
7 Cav	3							3		3						3
17 Air Cav Less Trp	3	-						3		3						3
229 Atk Hel Bn	3							3		3						3
17 Sq Atk Hel	3							3		3						3
503 Avn Cbt Bn	5	3	1					9	4	3	2	1				10
8 Avn Cbt Bn	5	3	1					9	4	3	2	1				10
501 Avn Cbt Bn	6	3	1					10	4	4	2	1				11
3 Avn Cbt Bn	6	3	1					10	4	4	2	1				11
11 Air Cav	2							2	1		1					2
2 Air Cav	2							2	1		1					2
701 Maint		1	1					2	1		1					2
705 Maint		1	1					2	1		1					2
34 Supt ACCB	1	3	3					7	5		2					7
73 Aer Surv		2	1					3	2		1					3
2 Air Rcn	3	1	1					5	3		2					5
15 AE	1	1						2	1		1					2
172 Det AS	1		1					2	1		1					2
1 Avn Guardrail	1	1						2	1		1					2

MOS 68F

TOE FORCE

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
146 Avn Fwd	1	2						3	2		1					3
330 Avn Fwd		1						1		1						1
180 Aslt Spt	1	1	2					4	3		1					4
205 Aslt Spt	1	1	2					4	3		1					4
295 Hvy Hel	1	1	2					4	3		1					4
5 Maint		6	2					8	6		2					8
70 Maint		1						1		1						1
394 Maint	4	4	3	1				12	5	1	5	1				12
205 Maint	4	4	3	1				12	5	1	5	1				12
568 Maint	1	3	5					9	4	1	4	1				10
45 Maint		4	2					6	3	1	2	1				7
347 Maint		4	2					6	3	1	2	1				7
507 Maint		4	2					6	3	1	2	1				7
517 Maint		4	2					6	3	1	2	1				7
528 Maint		4	2					6	3	1	2	1				7
590 Maint		4	2					6	3	1	2	1				7
609 Maint		4	2					6	3	1	2	1				7
2 Avn Bn	2	1	1					4	1	2	1					4
82 Avn Bn	4	2	1					7	2	3	2					7
7 Avn Bn	2	2	1					5	2	1	2					5
25 Avn Bn	2	2	1					5	2	1	2					5
9 Avn Bn	2	1	1					4	1	2	1					4
114 Aslt Hel	1							1		1						1
101 Bde HHC	1							1		1						1
101 Bde HHC	1							1		1						1
101 Bde HHC	1							1		1						1

	CURRENT								PROPOSED							
UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
TDA FORCE																
USAG Carson			1					1		1						1
USA Avn Det Japan			1					1		1						1
USAARMC Knox	1							1		1						1
USAIC	1	1						2	1		1					2
Redstone Ars Spt		1						1		1						1
Yuma PG		2						2	1		1					2
Cold Test Rgn			1					1		1						1
Engr Flt Act				1				1								
Acft Dev Test			4					4	2		2					4
Troop Spt & Mat			1					1		1						1
USAPG Dev & Tng	1							1		1						1
Aviation Center	1	1						2	1		1					2
Transportation School	1	1		15				17		2		17				19

MOS 68G

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	TI E5	TI E6	E6	E7	E8	E9	TOTAL
TOE FORCE																		
25 Corps	2	1	1					4	1	2	1							4
62 Corps	2	1	1					4	1	2	1							4
207 Army			1					1		1								1
18 Corps	2	1	1					4	1	2	1							4
55 Army	2	1	2					5	2	2	1							5
56 Army	2	1	2					5	2	2	1							5
132 Aslt Spt Hel	3	1	2					6	2	2	2							6
147 Aslt Spt Hel	3	1	2					6	2	2	2							6
178 Aslt Spt Hel	3	1	2					6	2	2	2							6
179 Aslt Spt Hel	3	1	2					6	2	2	2							6
243 Aslt Spt Hel	3	1	2					6	2	2	2							6
196 [illegible]lt [illegible]el	3	1	2					6	2	2	2							6
[illegible] Aslt Spt Hel		4	4					8	3	3	2							[illegible]
213 Aslt Spt Hel	3	1	2					6	2	2	2							6
271 Aslt Spt Hel	3	1	2					6	2	2	2							6
352 Det Aslt Hel		1	2					3	1	1	1							3
6 Avn Svc			1					1		1								1
2 HHB Div Arty		2	1					3	1	1	1							3
1 HHB Div Arty		2	1					3	1	1	1							3
4 HHB Div Arty		2	1					3	1	1	1							3
5 HHB Div Arty		2	1					3	1	1	1							3
9 HHB Div Arty		2	1					3	1	1	1							3
197 HHC Bde	2	1						3	1	1	1							3
159 Aslt Bn	9	3	6					18	6	6	6							18
222 HHC Bn		2	2					4	1	2	1							4
101st Aslt Hel Bn		6						6	3	3								6
158 Aslt Hel Bn		6						6	3	3								6

MOS 68G

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
163 Av																
Gen Spt	2	1	1					4	1	2	1					4
118 Aslt Hel Sep		3	2					5	2	2	1					5
119 Aslt Hel Sep		3	2					5	2	2	1					5
121 Aslt Hel Sep		3	2					5	2	2	1					5
129 Aslt Hel Sep		3	2					5	2	2	1					5
335 Aslt Hel Sep		3	2					5	2	2	1					5
120 Aslt Hel Sep	3	2						5	2	2	1					5
117 Ast Hel Sep		5	2					7	3	2	2					7
128 Ast Hel Sep		5	2					7	3	2	2					7
201 Aslt Hel Sep		1	1					2	1	1						2
48 Av Aslt Hel Sep		4	2					6	2	2	2					6
173 Av Aslt Hel Sep		4	2					6	2	2	2					6
326 Med Bn	1	1						2	1	1						2
498 Air Amb	2	1						3	1	1	1					3
507 Air Amb	1	1						2	1	1						2
421 Air Amb	2	1						3	1	1	1					3
377 Air Amb	2	1						3	1	1	1					3
3 HHT																
Reg Cav	1	1						2	1	1						2
3 Air Cav	1	1	1					3	1	1	1					3
24 Avn Bn	10	7	5	2				24	9	8	5					22
377 A TA	1	1						2	1	1						2
2 Cav																
Spt Air	2	1	1					4	1	2	1					4
11 Cav																
Spt Air	2	1	1					4	1	2	1					4
227 Avn Bn	12	9	7	4				32	11	10	7					28
17 Cav																
Airmob	6	3	3					12	3	6	3					12
9 Cav	2	1	1					4	1	2	1					4
10 Cav	2	1	1					4	1	2	1					4
4 Cav	2	1	1					4	1	2	1					4
9 Less Trp C	2	1	1					4	1	2	1					4
12 Less TrpC	2	1	1					4	1	2	1					4
1 Air Cav E	2	1	1					4	1	2	1					4
1 Air Cav G	2	1	1					4	1	2	1					4

CURRENT — MOS 68G — PROPOSED

UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
								TOE FORCE								
155 Av Atk Hel		1	2					3	1	1	1					3
4 Air Cav Less Trp	2	2	2					6	2	2	2					6
10 Air Cav Less Trp	3	3	3					9	3	3	3					9
5 Air Cav	3	3	3					9	3	3	3					9
9 Cav Air Less Trp	2	2	2					6	2	2	2					6
7 Cav	3	3	6					12	3	6	3					12
17 Air Cav Less Trp	3	3	3					9	3	3	3					9
229 Atk Hel Bn	9	3	6					18	6	6	6					18
17 Sq Atk Hel	9	3	6					18	6	6	6					18
503 Avn Cbt Bn	12	6	8	2				28	9	9	8					26
8 Avn Cbt Bn	12	6	8	2				28	9	9	8					26
501 Avn Cbt Bn	13	7	8	2				30	10	9	9					28
3 Avn Cbt Bn	13	7	8	2				30	10	9	9					28
11 Air Cav	2	1	2					5	2	2	1					5
2 Air Cav	2	1	2					5	2	2	1					5
701 Maint	1	8	4	1				14	5	4	4					13
705 Maint	4	4	3	1				12	4	4	3					11
34 Supt ACCB	11	13	3	2				29	10	9	8					27
73 Aer Surv	3	2						5	2	2	1					5
2 Air Rcn	2	2	1					5	1	3	1					5
15 AE	2	1						3	1	1	1					3
172 Det AS		1						1	1							1
1 Avn Guardrail		1						1	1							1
146 Avn Fwd		1						1	1							1
330 Avn Fwd		2						2	1	1						2
180 Aslt Spt	2	1	2					5	2	2	1					5
205 Aslt Spt	2	1	2					5	2	2	1					5

MOS 68G

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL TOE FORCE	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
295 Hvy Hel	2	1	2					5	2	2	1					5
5 Maint	22	14	16	2				54	20	16	16					52
70 Maint		1						1	1							1
394 Maint	19	13	13	4				49	17	15	13					45
205 Maint	21	14	16	1				52	20	16	15					51
568 Maint		9	10	2				21	7	6	6					19
45 Maint	11	6	10	1				28	11	9	7					27
347 Maint	11	8	8	1				28	11	8	8					27
507 Maint	11	8	8	1				28	11	8	8					27
517 Maint	11	8	8	1				28	11	8	8					27
528 Maint	11	8	8	1				28	11	8	8					27
590 Maint	11	8	8	1				28	11	8	8					27
609 Maint	11	8	8	1				28	11	8	8					27
2 Avn Bn	3	6	5	2				16	6	5	3					14
82 Avn Bn	13	8	7	2				30	11	10	7					28
25 Avn Bn	8	6	5	3				22	8	7	4					19
9 Avn Bn	8	6	5	2				21	8	7	4					19
114 Aslt Hel	1	1						2	1	1						2
101 Bde HHC	2	1						3	1	1	1					3
101 Bde HHC	2	1						3	1	1	1					3
101 Bde HHC	2	1						3	1	1	1					3
7th Avn Bn	6	6	5	2				19	7	6	4					17

MOS 68G

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TDA FORCE																
USAG Ord		1						1		1						1
USAG Carson			1					1		1						1
USA Avn Det Japan			1					1		1						1
USAARMC Knox	2	1						3	1	1	1					3
USAIC		1						1		1						1
Redstone Ars Spt		2	1					3	1	1	1					3
White Sands		1						1		1						1
Yuma PG		5						5	2	2	1					5
Engr Flt Act		1	1					2	1	1						2
Acft Dev Test			2					2	1	1						2
USAPG Dev & Tng	1	1						2	1	1						2
Aviation Center	1	1						2	1	1						2
Transportation School	2	3	1	40				46	2	3	1					6

MOS 68H

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
25 Corps	1							1		1						1
62 Corps	1							1		1						1
207 Army			1					1		1						1
18 Corps	1							1		1						1
55 Army	1							1		1						1
56 Army	1							1		1						1
132 Aslt Spt Hel	1	1	1					3	2		1	1				4
147 Aslt Spt Hel	1	1	1					3	2		1	1				4
178 Aslt Spt Hel	1	1	1					3	2		1	1				4
179 Aslt Spt Hel	1	1	1					3	2		1	1				4
243 Aslt Spt Hel	1	1	1					3	2		1	1				4
196 Aslt Spt Hel	1	1	2					4	2		2	1				5
242 Aslt Spt Hel		1	1					2	1		1					2
213 Aslt Spt Hel	1	1	1					3	2		1	1				4
271 Aslt Spt Hel	1	1	1					3	2		1	1				4
352 Det Aslt Hel			1					1		1						1
2 HHB Div Arty		1						1		1						1
1 HHB Div Arty		1						1		1						1
4 HHB Div Arty		1						1		1						1
5 HHB Div Arty		1						1		1						1
9 HHB Div Arty		1						1		1						1
197 HHC Bde	1							1		1						1
159 Aslt Spt Bn	3	3	3					9	6		3	3				12
222 HHC Bn		1						1		1						1
101 Aslt Hel Bn	3							3		3						3
158 Aslt Hel Bn	3							3		3						3

MOS 68H

TOE FORCE

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
163 Av Gen Spt	1							1		1						1
118 Aslt Hel Sep		1						1		1						1
119 Aslt Hel Sep		1						1		1						1
121 Aslt Hel Sep		1						1		1						1
129 Aslt Hel Sep		1						1		1						1
335 Aslt Hel Sep		1						1		1						1
120 Aslt Hel Sep	1							1		1						1
117 Aslt Hel Sep		1						1		1						1
128 Aslt Hel Sep		1						1		1						1
201 Aslt Hel Co	1							1		1						1
326 Med Bn	1							1		1						1
498 Air Amb	1							1		1						1
507 Air Amb	1							1		1						1
421 Air Amb	1							1		1						1
377 Air Amb	1							1		1						1
3 HHT Rgt Cav	1							1		1						1
3 Air Cav	1							1		1						1
24 Avn Bn	4	2						6	2	2	2					6
2 Cav Spt Air	1							1		1						1
11 Cav Spt Air	1							1		1						1
227 Avn Bn	4	1						5	1	3	1					5
17 Cav Airmob	3							3		3						3
9 Cav	1							1		1						1
10 Cav	1							1		1						1
4 Cav	1							1		1						1
9 Less Trp C	1							1		1						1
12 Less TrpC	1							1		1						1
1 Air Cav E	1							1		1						1
1 Air Cav G	1							1		1						1
155 Av Atk Hel			1					1		1						1

MOS 68H

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TOE FORCE																
4 Air Cav Less Trp	2							2		2						2
10 Air Cav Less Trp	3							3		3						3
5 Air Cav	3							3		3						3
9 Cav Air Less Trp	2							2		2						2
7 Cav	3							3		3						3
17 Air Cav Less Trp	3							3		3						3
229 Atk Hel Bn	3							3		3						3
17 Sq Atk Hel	3							3		3						3
503 Avn Cbt Bn	4	1						5	1	3	1					5
8 Avn Cbt Bn	4	1						5	1	3	1					5
501 Avn Cbt Bn	5	1						6	1	4	1					6
3 Avn Cbt Bn	5	1						6	1	4	1					6
11 Air Cav	1							1		1						1
2 Air Cav	1							1		1						1
701 Maint	.	1						1		1						1
705 Maint	1							1		1						1
34 Supt ACCB	2	1	1					4	2	1	1	1				5
73 Aer Surv		1	1					2	1		1					2
2 Air Rcn	1	1						2	1		1					2
15 AE	1	1						2	1		1					2
172 Det AS	1							1		1						1
1 Avn Guardrail	1							1		1						1
146 Avn Fwd	1							1		1						1
330 Avn Fwd		1						1		1						1
180 Aslt Spt			2					2	1		1					2
205 Aslt Spt			2					2	1		1					2
295 Hvy Hel			2					2	1		1					2
5 Maint	2							2		2						2
394 Maint	2	2	2	1				7	4		2	1				7

MOS 68H

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
205 Maint	1	1	2					4	2		2	1				5
568 Maint	1	3	2					6	4		2	1				7
45 Maint	1	1	2					4	2		2	1				5
347 Maint	1	1	1					3	2		1	1				4
507 Maint	1	1	1					3	2		1	1				4
517 Maint	1	1	1					3	2		1	1				4
528 Maint	1	1	1					3	2		1	1				4
590 Maint	1	1	1					3	2		1	1				4
609 Maint	1	1	1					3	2		1	1				4
170 Det Amphib Maint		1						1		1						1
2 Avn Bn	2	1						3		3						3
82 Avn Bn	5	2						7	2	3	2					7
7 Avn Bn	3	2						5	2	1	2					5
25 Avn Bn	3	2						5	2	1	2					5
9 Avn Bn	3	1						4	1	2	1					4
114 Aslt Hel	1							1		1						1
101 Bde HHC	1							1		1						1
101 Bde HHC	1							1		1						1
101 Bde HHC	1							1		1						1

MOS 68H

TDA FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
USAG Riley		1						1		1						1
USAG Carson			1					1		1						1
TC Eustis	1	1						2	1		1					2
USAIC		1						1		1						1
Yuma PG		2						3	1		1					2
Acft Dev Test			2	1				2	1		1					2
Transportation School				3				3				3				3

MOS 68J

	CURRENT								PROPOSED							
UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
101 HHC Gp Cbt				1				1				1				1
118 Aslt Hel									2	3	1	1	1 (from 68M)			8
48 Av Aslt																
Hel Sep	1	1						2	1	1						2
173 Av Aslt																
Hel Sep	1	1						2	1	1			(all but 1			2
3 Air Cav		1						1	2	2	1	1	from 68M)			6
24 Avn Bn	12	17	7	7				43	12	11	9	3	2			37
2 Cav																
Spt Air	1	1						2	1	1						2
11 Cav																
Spt Air	1	1						2	1	1						2
227 Avn Bn	12	17	7	6				42	13	11	9	3	2			38
17 Cav																
Airmob		3						3	6	6	3	3				18
9 Cav		1						1	2	3	1	1				7
10 Cav		1						1	2	3	1	1				7
4 Cav		1						1	2	3	1	1				7
9 Less Trp C		1						1	2	3	1	1				7
12 Less TrpC		1						1	2	3	1	1				7
1 Air Cav E		1						1	2	3	1	1				7
1 Air Cav G		1						1	2	3	1	1				7
155 Av																
Atk Hel		1						1	1	2	1	1				5
4 Air Cav																
Less Trp		2						2	4	4	2	2				12
10 Air Cav																
Less Trp		3						3	6	6	3	3				18
5 Air Cav		3						3	6	6	3	3				18
9 Cav Air																
Less Trp		2						2	4	6	2	2				14
7 Cav		3						3	6	9	3	3				21
17 Air Cav																
Less Trp		3						3	6	6	3	3				18
229 Atk																
Hel Bn	3	3		3				9	12	9	9	3	3			36
17 Sq																
Atk Hel	3	3		3				9	12	9	9	3	3			36

MOS 68J

TOE FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
503 Avn Cbt Bn	18	17	7	2				44	13	10	10	4	3			40
8 Avn Cbt Bn	18	17	7	2				44	13	10	10	4	3			40
501 Avn Cbt Bn	18	17	7	2				44	13	10	10	4	3			40
3 Avn Cbt Bn	18	17	7	2				44	13	10	10	4	3			40
11 Air Cav	2	2	1	2				7	3	3	2	1	1			10
2 Air Cav	2	2	1	2				7	3	3	2	1	1			10
701 Maint		3	3	3				9	1	1	1	1				4
705 Maint	3	2	2	2				9	1	2	1	1				5
34 Supt ACCB	8	9	4	1				22	5	5	4	2	1			17
2 Mat Mgmt				1				1				1				1
4 Mat Mgmt				1				1				1				1
5 Maint	24	22	8	4				58	12	10	8	4	2			36
394 Maint	13	14	7	3				37	7	6	6	2	1			22
20[illegible] Maint	15	15	7	2				39	8	6	6	2	1			23
568 Maint		3	1					4	1	1	1					3
45 Maint	2	3		1				6	1	1	1					3
347 Maint	6	5	2	3				16	2	3	2	1	1			9
507 Maint	6	5	2	3				16	2	3	2	1	1			9
517 Maint	6	5	2	3				16	2	3	2	1	1			9
528 Maint	6	5	2	3				16	2	3	2	1	1			9
590 Maint	6	5	2	3				16	2	3	2	1	1			9
609 Maint	6	5	2	3				16	2	3	2	1	1			9
2 Avn Bn		4	5	2				11	2	2	1	1				6
82 Avn Bn	16	15	7	7				45	12	15	10	4	2			43
7 Avn Bn	13	13	7	6				39	8	8	8	2	1			27
25 Avn Bn	15	14	7	6				42	8	12	7	3	1			31
9 Avn Bn	15	14	7	6				42	8	12	7	3	1			31

MOS 68J

UNIT	CURRENT E3	E4	E5	TI E6	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
									TDA FORCE								
LG CMD					1				1								
USAG Campbell														1			1
USA Agcy for Avn Sfty														1			1
TC Eustis	2	2	1						5	1	1	1					3
USAARMC Knox	1	1			1				3		1						1
Avn Bd				1	1				2				2				2
Yuma PG					1				1								-
Acft Dev Test		1			1				2		1		1	1			3
Troop Spt & Mat														1			1
Arma Read CMD													2	2			4
USAPG Dev & Test		1			1				2		1						1
Aviation Center					2				2	8	6	6	7	3			30
Transportation School	1	2	1		60				64	1	2	1	71	47			122

MOS 68K

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
25 Corps					1			1				1	1			2
62 Corps					1			1				1	1			2
18 Corps					1			1				1	1			2
55 Army					1			1				1	1			2
56 Army					1			1				1	1			2
196 Aslt Spt Hel												1	1			2
242 Aslt Spt Hel												2	1			3
213 Aslt Spt Hel												1	1			2
271 Aslt Spt Hel												1	1			2
352 Av Det Aslt Hel												1	1			2
2 HHB Div Arty												1				1
1 HHB Div Arty												1				1
4 HHB Div Arty												1				1
5 HHB Div Arty												1				1
9 HHB Div Arty												1				1
197 HHC Bd												1				1
159 Aslt Spt Hel												3	3			6
222 HHC Bn												1	1			2
101 Aslt Hel Bn					3			3				3				3
158 Aslt Hel Bn					3			3				3				3
163 Avn Gen Spt												1	1			2
118 Aslt Hel Sep												1	1			2
119 Aslt Hel Sep												1	1			2
121 Aslt Hel Sep												1	1			2
129 Aslt Hel Sep												1	1			2
335 Aslt Hel Sep												1	1			2
120 Aslt Hel Sep					1			1				1	1			2
117 Aslt Hel Sep												1	1			2
128 Aslt Hel Sep												1	1			2
201 Aslt Hel Sep					1			1				1				1
48 Av Aslt Hel Sep					1			1				1	1			2
173 Aslt Hel Sep					1			1				1	1			2
498 Air Amb												1				1
507 Air Amb												1				1
421 Air Amb												1				1
377 Air Amb												1				1
3 HHT Rgt Cav					1			1				1				1
3 Air Cav					1			1				1				1

CURRENT — MOS 68K — PROPOSED

TOE FORCE

UNIT	E3	E4	E5	E6	E7	E8	E9	TOTAL	E3	E4	E5	E6	E7	E8	E9	TOTAL
132 Aslt Spt Hel												1	1			2
147 Aslt Spt Hel												1	1			2
178 Aslt Spt Hel												1	1			2
179 Aslt Spt Hel												1	1			2
243 Aslt Spt Hel												1	1			2
24 Avn Bn					5			5				5	3			8
2 Cav Spt Air												1	1			2
11 Cav Spt Air												1	1			2
227 Avn Bn					4			4				5	3			8
17 Cav Airmob												3	3			6
9 Cav												1	1			2
10 Cav												1	1			2
4 Cav												1	1			2
9 Less Trp C												1	1			2
12 Less Trp C												1	1			2
1 Air Cav E												1	1			2
1 Air Cav G												1	1			2
155 Av Atk Hel					1			1				1	1			2
4 Air Cav Less Trp					2			2				2				2
10 Air Cav Less Trp					3			3				3				3
5 Air Cav					3			3				3				3
9 Air Cav Less Trp					2			2				2				2
7 Cav					3			3				3	3			6
17 Air Cav Less Trp					3			3				3				3
229 Atk Hel Bn					3			3				3	3			6
17 Sq Atk Hel					3			3				3	3			6
503 Avn Cbt Bn					3			3				5	4			9
8 Avn Cbt Bn					3			3				5	4			9
501 Avn Cbt Bn					4			4				6	4			10
3 Avn Cbt Bn					4			4				6	4			10
11 Air Cav					1			1				1	1			2
2 Air Cav					1			1				1	1			2
34 Supt ACCB					1			1				5	3			8
73 Aer Surv												1	1			2
2 Air Recon					1			1				1	1			2
15 AE												1	1			2
172 Det AS												1				1
1 Avn Guardrail												1				1

MOS 68K

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
146 Avn Fwd												1	1			2
180 Aslt Spt Hel					1			1				1	1			2
205 Aslt Spt Hel					1			1				1	1			2
295 Hvy Hel					1			1				1	1			2
5 Maint					1			1				8	5			13
70 Maint					1			1					3			3
394 Maint					4			4				8	5			13
205 Maint					4			4				9	5			14
568 Maint												3	2			5
45 Maint					2			2				5	3			8
347 Maint					2			2				4	3			7
507 Maint					2			2				4	3			7
517 Maint					2			2				4	3			7
528 Maint					2			2				4	3			7
59C Maint					2			2				4	3			7
609 Maint					2			2				4	3			7
2 Avn Bn					4			4				4	1			5
82 Avn Bn					5			5				7	3			10
7 Avn Bn					4			4				4	3			7
25 Avn Bn					4			4				5	2			7
9 Avn Bn					4			4				5	1			6
114 Aslt Hel					1			1				1				1
101 Bde HHC												1				1
101 Bde HHC												1				1
101 Bde HHC												1				1
701 Maint Bn												2	1			3
705 Maint Bn												2	1			3

MOS 68K

TDA FORCE

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
USAG Carson												1				1
USA Agcy for Avn Sfty												1				1
Avn Bd					1			1					1			1
Yuma PG												1	1			2
Acft Dev Test					2			2				1	1			2
Troop Spt & Mat												1	1			2
Arma Read CMD					2			2								
Msl Readiness													1			1
USAPG Dev & Tng					1			1								
Aviation Center					3			3				3	2			5
Transportation School					81			81				69	62			131

MOS 68M

UNIT	CURRENT E3	E4	E5	E6	E7	E8	E9	TOTAL	PROPOSED E3	E4	E5	E6	E7	E8	E9	TOTAL
TOE FORCE																
18 Corps		1						1		1						1
101 Aslt Hel		3						3		3						3
158 Aslt Hel		3						3		3						3
163 Av																
Gen Spt	2	1	1					4	2	1	1					4
118 Aslt Hel	2	7	3	1				13	2	2	2	(balance chg to 68J)				6
201 Aslt Hel		1						1		1						1
48 Av Aslt Hel Sep			1					1		1						1
173 Av Aslt Hel Sep			1					1		1						1
3 Air Cav	3	4	2	1				10	2	2	1	(balance chg to 68J)				5
24 Avn Bn	8	9	5	1				23	10	9	7					26
2 Cav																
Spt Air		1						1	1							1
11 Cav																
Spt Air		1						1	1							1
227 Avn Bn	9	10	5	1				25	10	10	7					27
17 Cav																
Airmob	9	6	6	3				24	3	3	3					9
9 Cav	3	4	2	1				10	2	1	1					4
10 Cav	3	4	2	1				10	2	1	1					4
4 Cav	3	4	2	1				10	2	1	1					4
9 Less Trp C	3	4	2	1				10	2	1	1					4
12 Less TrpC	3	4	2	1				10	2	1	1					4
1 Air Cav E	3	4	2	1				10	2	1	1					4
1 Air Cav G	2	4	2	1				10	2	1	1					4
155 Av																
Atk Hel		4	3	1				8	2	1	1					4
4 Air Cav																
Less Trp	6	8		2				16	2	2	2					6
10 Air Cav																
Less Trp	9	12		3				24	3	3	3					9
5 Air Cav	9	12		3				24	3	3	3					9
9 Cav Air																
Less Trp	6	8	4	2				20	4	2	2					8
7 Cav	9	18		3				30	6	3	3					12
17 Air Cav																
Less Trp	9	6	6	3				24	3	3	3					9
229 Atk H																
Hel Bn	18	21	12					51	9	9	9					27

MOS 68M

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TOE FORCE																
17 Sq Atk Hel	18	21	12					51	9	9	9					27
503 Avn Cbt Bn	6	8	4					18	10	10	7					27
8 Avn Cbt Bn	6	8	4					18	10	10	7					27
501 Avn Cbt Bn	6	9	4					19	10	11	7					28
3 Avn Cbt Bn	6	9	4					19	10	11	7					28
11 Air Cav	3	4	2					9	2	2	2					6
2 Air Cav	3	4	2					9	2	2	2					6
701 Maint									1	1	1					3
705 Maint									1	1	1					3
34 Supt ACCB	3	1	1					5	5	4	3					12
5 Maint									10	8	6					24
394 Maint									6	5	4					15
205 Maint									7	5	5					17
568 Maint										1						1
45 Maint									1	1						2
347 Maint									2	2	2					6
507 Maint									2	2	2					6
517 Maint									2	2	2					6
528 Maint									2	2	2					6
590 Maint									2	2	2					6
609 Maint									2	2	2					6
2 Avn Bn		2						2	2	3	1					6
82 Avn Bn	10	15	6	3				34	11	12	9					32
7 Avn Bn	3	7	2	3				15	8	7	6					21
25 Avn Bn	4	7	2	3				16	8	8	6					22
9 Avn Bn	4	8	2	3				17	8	9	6					23
114 Aslt Hel		1						1		1						1

MOS 68M

UNIT	CURRENT E3	CURRENT E4	CURRENT E5	CURRENT TI E6	CURRENT E6	CURRENT E7	CURRENT E8	CURRENT E9	CURRENT TOTAL	PROPOSED E3	PROPOSED E4	PROPOSED E5	PROPOSED E6	PROPOSED E7	PROPOSED E8	PROPOSED E9	PROPOSED TOTAL
TDA FORCE																	
TC Eustis																	
USAARMC Knox										1	1						2
AVN Bd		1		1	1				3		1						1
Red River					1				1		1						1
Acft Dev Test					1				1								
Troop Spt & Mat					1				1								
Arma Read CMD					2				2								
USAPG Dev & Tng	1	1							2	1	1						2
Aviation Center	13	17	6		6				42	6	5	5					16
Transportation School	1	1			23				25	1	1						2

APPENDIX F

GLOSSARY

ACRONYMS	DEFINITION
AA	Active Army
AAPRSO	Army Aviation Personnel Requirements for Sustained Operations Study
ACAB	Air Cavalry Attack Brigade
ACAS	Air Cavalry Attack Squadron
ACAT	Air Cavalry Attack Troop
ACT	Air Cavalry Troop
ADV WX	Adverse Weather
AHB	Attack Helicopter Battalion
AHC	Attack Helicopter Company
AIREVAC	Medical Evacuation by Aircraft
AIT	Advanced Individual Training
ALSE	Aviation Life Support Equipment
ARNG	Army National Guard
ARPRINT	Army Program for Individual Training
ART	AErial Reconnaissance Troop
ASI	Additional Skill Identifier
ATM	Aircrew Training Manual
AVIM	Aviation Intermediate Maintenance
AVNEC	Army Aviation Employment Conference
AVUM	Aviation Unit Maintenance
BT	Basic Training

CMF	Career Management Field
CSAB	Combat Support Aviation Battalion
CSAC	Combat Support Aviation Company
EB	Enlistment Bonus
EPMS	Enlisted Personnel Management System
ETS	Expiration-Term of Service
FH	Flight Hour
FW	Fixed Wing Aircraft
GRT	Ground Reconnaissance Troop
GSAC	General Support Aviation Company
GSE	Ground Support Equipment
HHC	Headquarters and Headquarters Company
IRR	Individual Ready Reserve
ISD	Instructional Systems Development
MACRIT	Manpower Authorization Criteria
ME	Maintenance Error Mishap Rates
MOS	Military Occupational Specialty
MMH	Maintenance Manhours
MTOE	Modified Tables of Organization and Equipment

ODCSLOG	Office Deputy Chief of Staff Logistics
OJE	On-the-Job Experience
OJT	On-the-Job Training
PERSACS	Personnel Structure and Composition System
POI	Program of Instruction
PZ	Primary Zone (Promotion)
QC	Qualilty Control
RAM	Reliability, Availability, Maintainability
RC	Reserve Components
RS	Reconnaissance Squadron
RW	Rotary Wing Aircraft
SDAPP	Special Duty Assignment Proficiency Pay
SEMA	Special Electronics Mission Aviation Company
SGA	Standards of Grade Authorizations
SL (1, 2, 3, 4, 5)	Skill Level - SL1 E3 & E4, SL2 E5, SL3 E6, SL4 E7, and SL5 E8 & E9
SOJT	Supervised On-the-Job Training
SQI	Special Qualification Identifier
SRB	Selective Reenlistment Bonus
SSG	Special Study Group
SZ	Secondary Zone (Promotions)

TAADS	The Army Authorization Documents System
TAMC	Transportation Aircraft Maintenance Company
TAMMS	The Army Maintenance Management System
TARS	Transportation Aircraft Repair Shop
TDA	Table of Distribution and Allowances
TI	Technical Inspector
TIG	Time in Grade
TIS	Time in Service
TOE	Table of Organization and Equipment
TOW	Tube-Launched Optically Tracked, Wire-Guided Missile
TTHS	Transient, Trainees, Prisoners and Patients (Personnel Accounting)
USAR	United States Army Reserve
YOS	Years of Service